



Environmental Assessment

General Management Plan Revision / Site Development Study

New Visitor Center, Administrative, and Maintenance Facilities

December 2007



ENVIRONMENTAL ASSESSMENT
GENERAL MANAGEMENT PLAN REVISION /
SITE DEVELOPMENT STUDY

New Visitor Center, Administrative, and Maintenance Facilities



National Park Service

Tallgrass Prairie National Preserve
Kansas

**U.S. Department of the Interior
National Park Service**

**Environmental Assessment
General Management Plan Revision / Site Development Study
New Visitor Center, Administrative, and Maintenance Facilities**

**Tallgrass Prairie National Preserve
Chase County, Kansas**

Summary

The National Park Service (NPS) proposes to revise the *Tallgrass Prairie National Preserve General Management Plan* (2000 GMP) (NPS 2000a) because of changing circumstances (a new management partner) and new information. This general management plan revision (GMP revision) would amend and supplement the 2000 GMP. The GMP revision is intended to (1) reexamine management areas as they relate to the location of the visitor, administrative, and maintenance facilities; (2) modify management areas in order to implement desired conditions with regard to location of the proposed facilities, natural and cultural resources management and protection, and visitor experience and appreciation; and (3) determine whether actions proposed by the National Park Service or others are consistent with goals embodied in the approved 2000 GMP. All other decisions and management direction presented in the 2000 GMP would remain valid.

The National Park Service also proposes to construct a visitor information and administrative center and maintenance facility at Tallgrass Prairie National Preserve. The general scope and need for these facilities is outlined in the *Tallgrass Prairie National Preserve General Management Plan* (NPS 2000a). A visitor information and administrative center would provide the initial stop for visitors and allow them to orient themselves and plan their visit. It would also serve as a staging area for a public transportation system and for education and interpretation efforts. The proposed visitor information administrative center would also include offices for preserve management. The proposed maintenance facility would include offices and workspaces for most maintenance and natural resources employees. It would also include inside and outside spaces for storage of equipment, materials, and vehicles, including buses. The proposed facilities would improve visitor services and NPS operations and maintenance at the preserve.

This GMP revision examines two alternatives. Alternative A is the no-action alternative, which provides a baseline against which to compare the other alternatives. Under this alternative, the 2000 GMP would not be revised, and new facilities would be constructed in locations as described in the 2000 GMP.

Under alternative B, the proposed action and preferred alternative, management areas would be modified as part of the GMP revision, and new facilities would be constructed in locations as described in the GMP revision.

There would be no change in management direction under alternative A, and there would be long-term adverse impacts to historic structures, cultural landscapes, soils, vegetation, wildlife, scenic quality, and water quality, which would range in intensity from minor to moderate.

Under alternative B, there would be short- and long-term adverse impacts to archeology, cultural landscapes, soils, prime and unique farmlands, vegetation, threatened and endangered species, wildlife, scenic quality, and water quality, at the proposed visitor center and administrative site. Impacts would range from negligible, negligible to minor, minor, or minor to moderate in intensity. There would be long-term, moderate, beneficial impacts to visitor experience/appreciation, and long-term, minor to moderate, beneficial impacts to preserve operations and historic structures. Under alternative B, there would be long-term adverse impacts to cultural landscapes, soils, prime and unique farmlands, vegetation, wildlife, scenic quality, and water quality at the proposed maintenance site. Impacts would range from negligible, negligible to minor, or minor in intensity. There would be long-term, negligible to minor, beneficial impacts to visitor experience/appreciation and long-term, minor to moderate, beneficial impacts to historic structures and preserve operations. The addition of acreage to the Flint Hills ranching legacy area under alternative B would result in negligible impacts to archeology, and long-term beneficial impacts to historic structures, cultural landscapes, soils, vegetation, wildlife, visitor experience/appreciation, scenic quality, and water quality. Impacts would range from negligible, negligible to minor, minor, or minor to moderate in intensity.

Note to Reviewers and Respondents

If you wish to comment on the GMP Revision / Site Alternatives Study, you may mail or e-mail comments to the address below. Our practice is to make comments available for public review during regular business hours. Individual respondents may request that we withhold their name and/or home address from the record, which we will honor to the extent allowable by law. *If you want us to withhold your name and/or address, you must state this prominently at the beginning of your comment.* We will make all submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Please address comments to:

Superintendent
Tallgrass Prairie National Preserve
PO Box 585
Cottonwood Falls, KS 66845
E-mail: tapr_superintendent@nps.gov

CONTENTS

SUMMARY I

ACRONYMS AND ABBREVIATIONS VII

INTRODUCTION 1

- Purpose of and Need for the General Management Plan Revision 3
- Purpose of and Need for Site Development Study— New Visitor, Administrative, and Maintenance Facilities 5
- Relationship of the Proposed Action to Previous Planning Efforts 6
 - 2000 General Management Plan 6
 - National Park Service Midwest Region Regional Museum Curation and Collection Management Planning 9
- Development Program for Preserve Facilities 9
 - Class C Cost Estimates 10
- Scoping 11
- Impact Topics 11
 - Impact Topics Included in this Document 12
 - Impact Topics Dismissed from Further Analysis 14

ALTERNATIVES 21

- Alternative A: No-action Alternative 21
 - Site Development / New Facilities 21
 - Site Analysis 22
- Alternative B: Preferred Alternative 22
 - General Management Plan Revision 22
 - Site Development/New Facilities 24
 - Site Analysis 26
- Mitigation Measures for the No-Action and Preferred Alternatives 28
- Environmentally Preferred Alternative 31
- Alternatives Considered But Dismissed From Detailed Analysis 32
- Comparative Summary of Alternatives 33

AFFECTED ENVIRONMENT 39

- Location and General Description of Tallgrass Prairie National Preserve 39
- Overview 39
- Historic Structures 40
 - Proposed Visitor Center / Administrative Parcel and Visitor Information and Orientation Area 40
 - Proposed Maintenance Parcel and Visitor Information and Orientation Area 40
 - Proposed Flint Hill Ranching Legacy Area Revision 40
- Archeology 41
 - Proposed Visitor Center / Administrative Parcel and Visitor Information and Orientation Area 42
 - Proposed Maintenance Parcel and Visitor Information and Orientation Area 42
 - Proposed Flint Hills Ranching Legacy Area Revision 42

CONTENTS

Cultural Landscapes	43
Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area	45
Proposed Maintenance Parcel and Visitor Information and Orientation Area	45
Proposed Flint Hills Ranching Legacy Area Revision	45
Soils	46
Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area	46
Proposed Maintenance Parcel and Visitor Information and Orientation Area	46
Proposed Flint Hills Ranching Legacy Area Revision	46
Prime and Unique Farmlands	47
Vegetation	48
Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area	51
Proposed Maintenance Parcel and Visitor Information and Orientation Area	53
Proposed Flint Hills Ranching Legacy Area Revision	53
Threatened and Endangered Species	55
Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area	57
Proposed Maintenance Parcel and Visitor Information and Orientation Area	57
Proposed Flint Hills Ranching Legacy Area Revision	57
Wildlife	57
Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area	58
Proposed Maintenance Parcel and Visitor Information and Orientation Area	58
Proposed Flint Hills Ranching Legacy Area Revision	58
Visitor Experience and Appreciation	58
Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area	59
Proposed Maintenance Parcel and Visitor Information and Orientation Area	59
Proposed Flint Hills Ranching Legacy Area Revision	60
Scenic Quality	60
Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area	60
Proposed Maintenance Parcel and Visitor Information and Orientation Area	61
Proposed Flint Hills Ranching Legacy Area Revision	61
Water Quality	61
Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area	62
Proposed Maintenance Parcel and Visitor Information and Orientation Area	62
Proposed Flint Hills Ranching Legacy Area Revision	63
Floodplains	63
Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area	63
Proposed Maintenance Parcel and Visitor Information and Orientation Area	64
Proposed Flint Hills Ranching Legacy Area Revision	64

Preserve National Park Service Operations 64

ENVIRONMENTAL CONSEQUENCES 65

Methodology for Assessing Impacts 65

Impairment of National Park Resources 65

Cumulative Impacts 66

Impacts to Cultural Resources / Section 106 of the National Historic Preservation Act 66

Criteria and Thresholds for Impact Analysis 67

Historic Structures 68

Archeology 69

Cultural Landscapes 70

Soils 71

Prime and Unique Farmlands 72

Vegetation 72

Threatened and Endangered Species 73

Wildlife 74

Visitor Experience/Appreciation 75

Scenic Quality 75

Water Quality 76

Floodplains 76

Preserve Operations 77

Environmental Consequences—No-Action Alternative 77

Historic Structures 77

Archeology 78

Cultural Landscapes 79

Soils 80

Prime and Unique Farmlands 81

Vegetation 81

Threatened and Endangered Species 82

Wildlife 83

Visitor Experience/Appreciation 84

Scenic Quality 85

Water Quality 86

Floodplains 86

Preserve Operations 87

Environmental Consequences—Preferred Alternative 87

Historic Structures 88

Archeology 89

Cultural Landscapes 91

Soils 92

Prime and Unique Farmlands 93

Vegetation 95

Threatened and Endangered Species 97

Wildlife 99

Visitor Experience/Appreciation 100

CONTENTS

Scenic Quality	101
Water Quality	103
Floodplains	104
Preserve Operations	105

CONSULTATION AND COORDINATION 107

Agencies, Organizations, and Tribes	107
-------------------------------------	-----

REFERENCES 109

PREPARERS AND CONSULTANTS 113

APPENDIX A: Agency Correspondence	115
APPENDIX B: Space Model Details	199
APPENDIX C: Scoping and Public Review	217
APPENDIX D: Alternatives Consideration	233
APPENDIX E: Site Visibility Analysis Maps	241

FIGURES

Figure 1. Vicinity Map	2
Figure 2. Selected Alternative for 2000 GMP	4
Figure 3. Proposed GMP Revision	23
Figure 4. Proposed Preserve Facility Locations	25
Figure 5. Preferred Alternative Site Analysis	27
Figure 6. Spring Hill / Z Bar Ranch Headquarters	41
Figure 7. Representative Tallgrass Prairie Community of the Preserve	50
Figure 8. Photograph of Fox Creek Tributary Woodlands	51
Figure 9. Representative Vegetation Described as “Go Back” Prairie	52
Figure 10. Photograph of Smooth Brome Pasture (site of 1930s ranch structures)	52
Figure 11. Photograph of Highway Right-of-Way Vegetation	53
Figure 12. Parcel of Disturbed Land Adjoining Strong City Sewage Lagoons	54
Figure 13. Gravel County Road with Smooth Brome in Right-of-Way	54
Figure 14. Topeka Shiner	56
Figure 15. Greater Prairie Chicken	58

TABLES

Table 1. Comparison of Management Area Acreage*	8
Table 2. Space Estimates for Preserve Facilities	10
Table 3. Alternative Comparison Table	33
Table 4. Impact Summary Table	34
Table 5. Character-Defining Features of the Tallgrass Prairie National Preserve Cultural Landscape	44

ACRONYMS AND ABBREVIATIONS

2000 GMP	Tallgrass Prairie National Preserve Final General Management Plan / Environmental Impact Statement
CFR	Code of Federal Regulations
cm	Centimeter
CR	County Road
FEMA	Federal Emergency Management Agency
GMP	General Management Plan
KDOT	Kansas Department of Transportation
NEPA	National Environmental Policy Act of 1969
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
SH	State Highway
SHPO	State Historic Preservation Office
USC	United States Code
USFWS	U.S. Fish and Wildlife Service

INTRODUCTION

Tallgrass Prairie National Preserve was established in 1996 “to preserve, protect, and interpret for the public an example of a tallgrass prairie ecosystem... and to preserve and interpret for the public the historic and cultural values represented on the Spring Hill Ranch” (Public Law 104-333, 110 Stat. 4204, 1996).

The preserve is located in northern Chase County, in east-central Kansas (figure 1), and consists of 10,894 acres of rolling grasslands in the heart of the Flint Hills. Two major creeks (Fox Creek and a tributary, Palmer Creek) cross the preserve and many springs, seeps, and stock ponds are also present. In addition to the buildings and structures related to the ranching history of the preserve, a number of less prominent archeological features have been identified.

Originally, the National Park Trust purchased the 10,894-acre remnant of tallgrass prairie in June 1994 for future management as a unit of the national park system. The legislation that created the preserve states that not more than 180 acres may be owned by the National Park Service (NPS). The remainder will continue to be privately owned.

In 2005, the National Park Trust sold their interest in Tallgrass Prairie National Preserve to the Kansas Park Trust. The Kansas Park Trust is dedicated to the mission of enhancing visitor experiences at the preserve by assisting in private fundraising efforts, encouraging congressional support for implementation of preserve management plans, conducting special public events, and operating an on-site bookstore and gift shop. Later in the same year, The Nature Conservancy purchased an interest in Tallgrass Prairie National Preserve from The Kansas Park Trust. The Nature Conservancy is a private nonprofit organization whose mission is, “...to preserve the plants, animals, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive” (TNC 2007a). The majority of Tallgrass Prairie National Preserve (all but 34.44 acres in federal ownership) is owned by The Nature Conservancy. The Tallgrass Prairie National Preserve is cooperatively managed by the National Park Service and The Nature Conservancy. The Nature Conservancy brings a new mission and objectives to long-term management of the preserve.

The National Park Service, The Nature Conservancy, and the Kansas Park Trust through its cooperating association with the National Park Service, remain partners in Tallgrass Prairie National Preserve. The three-party partnership is dedicated to:

- preserving and enhancing a nationally significant remnant of the tallgrass prairie ecosystem and the processes that sustain it
- preserving and interpreting the cultural resources of the preserve and the heritage associated with the former ranch property
- offering opportunities for education, inspiration, and enjoyment through public access to the geological, ecological, scenic, and historical features of the preserve (TNC 2007b)



FIGURE 1. VICINITY MAP

PURPOSE OF AND NEED FOR THE GENERAL MANAGEMENT PLAN REVISION

In 2000, the National Park Service completed a general management plan (GMP) (NPS 2000a) for the preserve with considerable public input. General management planning is the broadest level of decision making for parks. General management plans are required for all units in the national park system and are intended to establish the management direction of a park unit for the next 15 to 20 years. General management planning is the first phase of tiered planning and decision making. The general management plan looks years into the future and considers the park unit holistically, in its full ecological and cultural context and as part of a surrounding region. More detailed planning is contained in subsequent implementation plans.

The *Tallgrass Prairie National Preserve Final General Management Plan / Environmental Impact Statement* (2000 GMP) created management areas for the preserve (figure 2). These management areas prescribe certain actions and management objectives that can occur within the area. After a lengthy process (appendix E), it was concluded that the management area designated for visitor and preserve operations facilities within the preserve was not compatible with the mission and objectives of The Nature Conservancy, and that previously identified, adjacent, off-preserve building locations were no longer available. Therefore, the purpose of this GMP revision is to integrate the mission and objectives of the preserve's new primary landowner/partner, The Nature Conservancy, into long-term management and decision making for the protection of preserve resources and visitor experiences and uses. The kinds of facilities and possible areas of development in the preserve are also addressed.

Certain aspects of the 2000 GMP will need to be revised because of changing circumstances (the addition of The Nature Conservancy as a management partner) and new information (changes in the status of potential off-preserve development sites for visitor and preserve operation facilities). This GMP revision would amend and supplement the 2000 GMP. The GMP revision is intended to:

- Reexamine management areas for visitor information/orientation and the Flint Hills ranching legacy area, as they relate to the location of the visitor, administrative, and maintenance facilities.
- Modify these two management areas that implement the desired conditions of the National Park Service, The Nature Conservancy, the Kansas Park Trust, and the public with regard to location of the proposed facilities, natural and cultural resources management and protection, and visitor experience and appreciation.
- Determine whether actions proposed by the National Park Service or others are consistent with goals embodied in the approved 2000 GMP.
- Correct mapping errors that misidentified the school house and ranch headquarters within the visitor information / orientation area.

The GMP revision is needed to ensure that the foundation for decision making has been developed in consultation with preserve partners, interested stakeholders, and preserve and NPS leadership after an adequate analysis of the benefits, impacts, and economic costs of alternative courses of action.

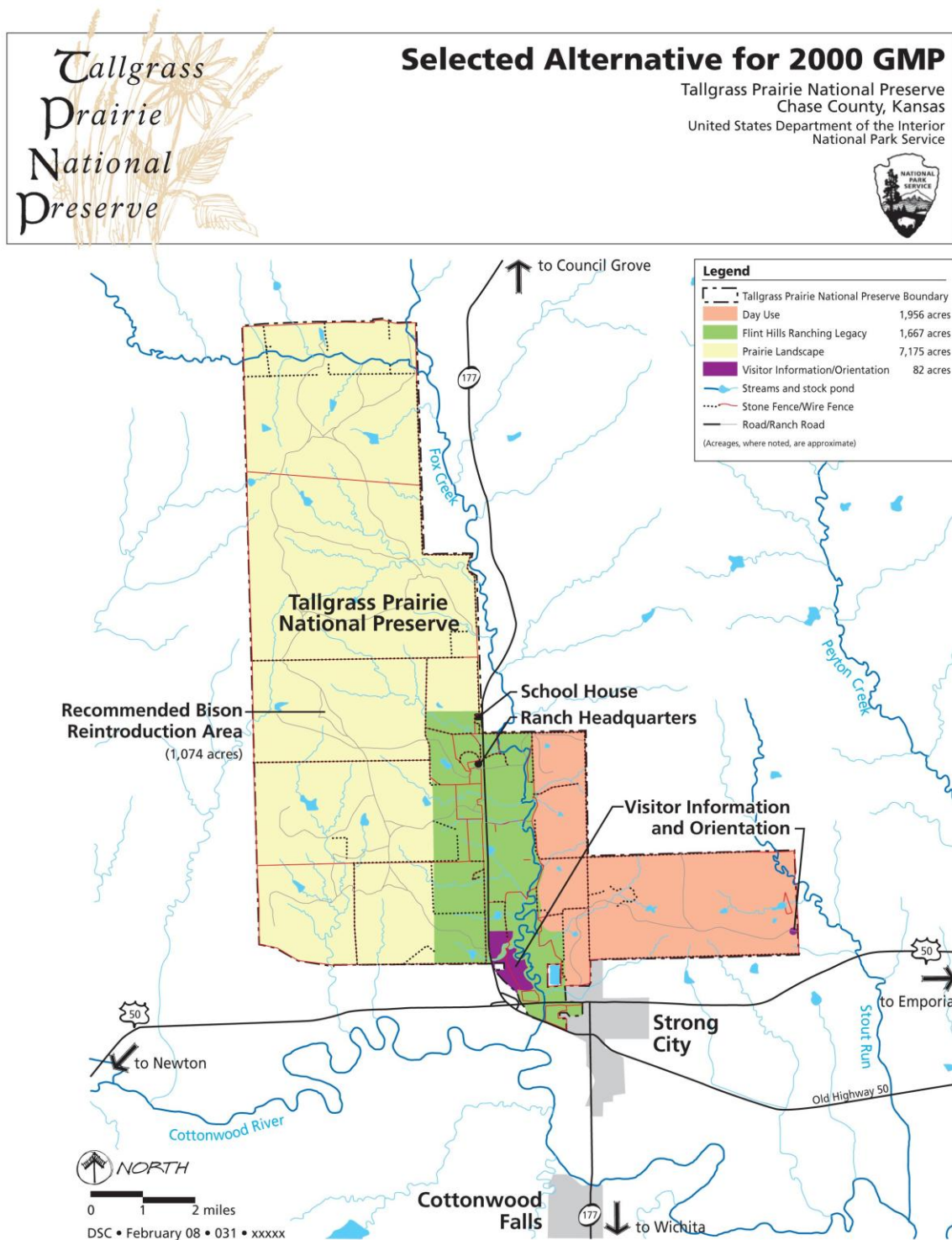


FIGURE 2. SELECTED ALTERNATIVE FOR 2000 GMP

All other decisions and management direction presented in the 2000 GMP would remain valid.

PURPOSE OF AND NEED FOR SITE DEVELOPMENT STUDY— NEW VISITOR, ADMINISTRATIVE, AND MAINTENANCE FACILITIES

The National Park Service proposes to construct a visitor information and administrative center, and a maintenance facility. The general scope and need for these facilities is identified in the 2000 GMP (NPS 2000a). A visitor information center would initiate the first stop for visitors and provide the opportunity to plan their visit. It would also provide parking and serve as a staging area for a public shuttle system and for education and interpretation efforts (NPS 2000a).

The historic Spring Hill / Z Bar Ranch Headquarters, constructed in 1881, consists of a ranch house, three-story barn, springhouse/curing room, privy, icehouse, and poultry house / scratch house. The entirety of the Spring Hill / Z Bar Ranch property is a national historic landmark. Currently, the historic Spring Hill / Z Bar Ranch house and barn are serving as a visitor information station and for certain other public and administrative services. The barn is used for visitor services during the warm months; the ranch house is used during the cold months. The second floor of the ranch house is wheelchair accessible via removable ramps. The mix of uses in the ranch house (visitor information, bookstore, video presentation, offices, etc.) is not compatible with interpretation of the facility. (Interpretation is the communication of ideas, feelings, and stories that enrich understanding and appreciation of preserve resources.) During busy periods, the ranch house becomes crowded and noisy, affecting the information and interpretive services that staff are able to provide. The barn (unheated in winter) is used for orienting and interacting with visitors from approximately May through October.

The proposed administrative facilities would include offices and parking. Currently, the preserve's administrative offices are located in leased space on Broadway Street in Cottonwood Falls, which is located about 2.0 miles south of Strong City (see figure 1).

The proposed maintenance facility would include offices and workspaces for most maintenance and natural resource employees. It would also include inside and outside spaces for storage of equipment, materials, and vehicles, including buses. Employee and vehicle motorpool parking would be provided at the site. The preserve currently has no maintenance facility. Vehicles and equipment are stored in outbuildings at the historic Spring Hill / Z Bar Ranch Headquarters and the small one-room historic icehouse is used as a shop.

Tallgrass Prairie National Preserve averages between 18,000 and 19,000 visitors per year. The 2000 GMP (NPS 2000) identified a need for visitor, administrative, and maintenance facilities to support visitor information and orientation and operations of the preserve. The purpose of the proposed action is to provide new visitor, administrative, and maintenance facilities. The proposed action is needed to achieve desired future conditions and management objectives for the preserve, and to interpret the tallgrass prairie and historic and cultural values for visitors to the preserve.

RELATIONSHIP OF THE PROPOSED ACTION TO PREVIOUS PLANNING EFFORTS

2000 General Management Plan

A general management plan focuses on why the preserve was established (purpose and mission), why it is special (significance), and what resource conditions and visitor experiences should be achieved and maintained (desired conditions).

As stated in the 2000 GMP, the preserve's purpose is

- to preserve, protect, and interpret for the public an example of a tallgrass prairie ecosystem
- to preserve and protect the cultural resources found within the preserve
- to interpret for the public, the cultural resources and the social and cultural values represented within the preserve

The significance of Tallgrass Prairie National Preserve is as follows:

- Of the 400,000-square miles (1,036,279-square kilometers) of tallgrass prairie ecosystem that once covered North America, less than 4% remains; Tallgrass Prairie National Preserve represents a portion of this remnant.
- The landscape of Tallgrass Prairie National Preserve contains a unique collection of natural and cultural features that tells the story of human interaction with the prairie environment, from precontact times to the present.
- The Spring Hill Ranch is an outstanding representation of the transition from the open range to the enclosed holdings of the large cattle companies of the 1880s.
- The Spring Hill Ranch area contains outstanding examples of second empire and other 19th century architectural styles.
- Tallgrass Prairie National Preserve offers opportunities for extraordinary and inspirational scenic views of the Flint Hills prairie landscape.

The 2000 GMP also presents a set of “desired futures” for the preserve that represent desirable conditions that would achieve the purpose of the preserve:

- The preserve's private landowner and the National Park Service maintain a strong partnership to accomplish the mission of the preserve.
- The preserve's management team maintains effective working relationships with preserve neighbors, adjacent communities, and other partners in order to identify and cooperate on issues of mutual interest.

- The preserve has adequate information available for making management decisions.
- Management activities and policies at the preserve lead to the enhancement of the tallgrass prairie ecosystem and a greater understanding of its associated processes.
- Diverse disturbance regimes are an integral part of management activities at the preserve.
- The preserve's seeps, springs, and streams are in a healthy ecological condition and support a diverse aquatic community.
- Open and unobstructed views are maintained as an integral part of the prairie experience.
- Resources are managed to interpret the legacy of human interaction in the Flint Hills.
- Natural and cultural resources are managed to preserve the character-defining features of the Flint Hills cultural landscape.
- The preserve's historic records and objects are properly managed and preserved.
- Education and interpretation efforts extend beyond the boundary of the preserve in order to reach a wide audience.
- Visitors are transported to and through the preserve using a variety of transportation modes, in order to protect the landscape and provide high-quality visitor experiences.

In developing the 2000 GMP, the National Park Service developed five action alternatives that placed visitor services in different areas of the preserve. A sustainable management panel convened and stated that visitor services should be located at the preserve's southern extremity—not at the historic Spring Hill / Z Bar Ranch Headquarters. Additionally, the environmental impact statement accompanying the GMP found that vegetation impacts from development in the southern portion of the preserve would be minimal. These statements were based in part on the fact that there was previously disturbed land inside and outside the preserve near the southern portion on which the visitor center could be built, and that the native prairie in the southern extremity was an isolated fragment of the much larger parcel of prairie preserved in the rest of the park.

The preferred and selected alternative in the 2000 GMP proposed to develop the primary visitor information and orientation area close to the junction of U.S. 50 and State Highway (SH) 177, near Strong City (see figure 2). This would have provided the initial first stop for visitors, allowing them easy access to basic information about the preserve and nearby community resources and services, and enabling them to orient themselves and plan their visit. The location of the visitor center and the services provided would have complemented visitor services in and near the communities of Strong City and Cottonwood Falls. The 2000 GMP stated the exact location would be selected to minimize impact on the prairie, retain aesthetic views and preserve natural and cultural resources, and take advantage of existing or proposed utilities. The exact location could be inside the preserve (as long as it was placed within the visitor information and orientation area) or outside the preserve boundaries.

In addition to location, the 2000 GMP stated that the facility would serve as the primary staging area for a public transportation system and for basic education and interpretation efforts, and include administrative offices, museum collections and archives storage, a maintenance area, and parking areas.

Since the completion of the 2000 GMP, ownership of the preserve has transferred to The Nature Conservancy. The Nature Conservancy has a strict policy regarding acceptable impacts to pristine prairie. As evidenced by their mission (“...to preserve the plants, animals and natural communities that represent the diversity of life on Earth...”), The Nature Conservancy would not support development of a visitor center / administration facility on pristine prairie, no matter the size or location of the parcel. The Nature Conservancy has emphasized that the new management areas (for visitor information and maintenance) be sited so that only minimal deconstruction of native prairie occurs. The guidelines for siting the visitor information and orientation area over a portion of the preserve include placing it near the boundary, out of the floodplain, and in a way that minimizes impacts on prairie resources. The visitor information and orientation management area must harmonize with the special visual qualities of the landscape and the cultural features that create a sense of time and place unique to the preserve. In addition to these desired resource conditions, The Nature Conservancy proposes that the visitor information and orientation management area be constructed on reclaimed or “go back” prairie (previously tilled prairie that consists of native and nonnative grassland vegetation) or previously disturbed ground.

Additionally, over the past six years, areas outside the preserve that could be used for development became unavailable, and the National Park Service’s other primary partner, Kansas Park Trust, felt strongly that visitor services development be located in an area that facilitated visitor movement.

With these conditions in mind, the GMP revision proposes to specifically amend the 2000 GMP in the matter of the visitor information and orientation area location, while remaining consistent with the goals of the 2000 GMP.

Table 1 provides an overview of the management area acreage changes that would result from the GMP revision, and a comparison with the management area acreage under the 2000 GMP.

TABLE 1. COMPARISON OF MANAGEMENT AREA ACREAGE*

Management Areas	2000 GMP	GMP Revision
Visitor Information and Orientation	82	14
Flint Hills Ranching Legacy	1,667	1,735
Day Use	1,956	1,956 (no change)
Prairie Landscape	7,175	7,175 (no change)

*Acreages, where noted, are approximate.

National Park Service Midwest Region Regional Museum Curation and Collection Management Planning

The NPS Midwest Regional Office has developed a regional museum curation and collection management plan. Certain park units within the midwest region will serve as collection points. The preserve will not be one of these, so minimal space in the visitor center would be required for the preserve's museum collections.

DEVELOPMENT PROGRAM FOR PRESERVE FACILITIES

The National Park Service requires the use of servicewide space models (*NPS Facility Planning Model Report*) to determine building space needs and sizes. The models are based on servicewide parameters (e.g., visitation trends) and preserve-specific parameters (current and projected visitation, staff size, special circumstances, etc.).

The space model includes parking, exhibit kiosks, interpretative trail, wayside exhibits, amphitheater, bus and vehicle parking, bus platform, plaza, and patio for outdoor spaces associated with the visitor center. The following indoor functions are included in the visitor center space allocation:

- lobby with orientation desk, information desk, and storage
- exhibit space
- theater
- interpretive sales and storage
- staff restrooms
- offices
- general storage
- recycle bins
- staff lockers
- interpretive and education work area
- library
- break room
- visitor restrooms
- museum collection storage and workspace
- first-aid station

The space model includes parking and a patio for outdoor functions and the following indoor functions for the administration facility:

- administrative staff and superintendent's offices
- conference room
- restrooms
- library space
- mail and copy room
- lobby
- storage areas

- break room
- showers and lockers
- evidence room
- weapons storage
- researcher workspaces

The maintenance facility includes parking for staff cars, covered parking for preserve equipment (vehicles, mowers, etc.), excess property storage, vehicle fueling, road material storage, vehicle wash, recycle bins, and covered storage for outdoor supplies. The indoor functions include the following:

- lobby
- workroom and storage
- employee support (break room, lockers, and showers)
- carpentry shops and lumber and tool storage
- mechanical, plumbing, and electrical shop and storage
- hazardous materials storage
- grounds maintenance workroom and storage, including a greenhouse
- large vehicle maintenance (bay large enough for tour bus)
- small engine, equipment storage
- indoor parking vehicle storage
- maintenance shops and storage for roads, bridges, and trail equipment
- general storage for custodial, resource management, and maintenance projects
- warehouse

Table 2 provides a summary of the space estimates generated by the model. See appendix B for additional space model details.

TABLE 2. SPACE ESTIMATES FOR PRESERVE FACILITIES

Space Estimates		
	<i>Building (+/- 10%)</i>	<i>Site</i>
Visitor Center	7,400 square feet	0.80 acres
Administration Facility	5,400 square feet	0.90 acres
Maintenance Facility	9,400 square feet	2.3 acres

The visitor center and administration facility estimates include space for processing preserve collections and some curation storage for items transitioning to/from exhibits and long term storage. The remainder of the museum collection would be kept at a centralized regional facility. The site figures for the facilities include necessary associated parking. The space estimates on the maintenance facility include outdoor or uncovered storage.

Class C Cost Estimates

The Class C cost estimates will be calculated at the earliest design phase.

SCOPING

Scoping is an effort to involve agencies and the general public in determining issues to be addressed in the GMP revision. Scoping for the project began in October 2003. A press release describing the proposed action was issued on October 27, 2003 (appendix C). A scoping letter was sent to concerned individuals, agencies, and affiliated tribes on October 28, 2003 (appendix C). Response letters were received from the U.S. Fish and Wildlife Service (USFWS), Kansas Department of Health and Environment, Kansas State Historical Society, Kansas Division of Water Resources, and the Osage Tribal Council (appendix C). In general, these letters identified issues of concern to the agencies or tribe. Three letters were also received from concerned citizens, who suggested possible sites for the facilities—see the discussion in appendix C for details.

In August 2005, the National Park Service, The Nature Conservancy, and the Kansas Park Trust agreed to revisit prior decisions and look at new alternatives because of The Nature Conservancy's desire to avoid impacts to pristine native prairie and the lack of other viable options in and near the preserve. Two new sites were proposed (one for the visitor center and administrative facilities, and a second location for the maintenance facility). Based on this decision, notification letters about the change of the project scope were sent to agencies in March, July, and August 2006.

IMPACT TOPICS

Issues and concerns related to the proposed action were identified throughout the preliminary planning process by specialists from the National Park Service, The Nature Conservancy, Kansas Park Trust, as well as federal and state agencies, American Indian tribes, and the public. Impact topics are the resources of concern that could be affected by the alternatives. Specific impact topics were identified to ensure that the alternatives were compared on the basis of the most relevant topics. Impact topics were identified based on federal laws, regulations, orders, *NPS Management Policies* 2006, and NPS knowledge of special or vulnerable resources.

The National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's implementing regulations (40 *Code of Federal Regulations* [CFR] 1500–1508) requires the consideration of impacts on affected ecosystems and is the basic national charter for the protection of the environment. NEPA requires federal agencies to use all practicable means to restore and enhance the quality of the human environment and to avoid and minimize any possible adverse effects of their actions on the environment. Specific impact topics were identified to focus discussion and comparison of the environmental consequences of each alternative.

Impact Topics Included in this Document

Historic Structures

The National Historic Preservation Act of 1966, as amended in 1992 (16 *United States Code* [USC] 470 *et seq.*), NEPA, NPS Organic Act, NPS *Management Policies* 2006, Director's Order – 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (2001), and Director's Order – 28: *Cultural Resources Management Guideline* require the consideration of impacts on cultural resources, including historic structures, either listed in or eligible to be listed in the National Register of Historic Places (NRHP). Historic structures currently house park operations and visitor services, and are adjacent to the proposed alternative sites; therefore, the impact topic of historic structures is included for further analysis.

Archeology

Archeological resources are known to be present within the preserve; however, their extent and exact locations are unknown. The proposed sites may contain archeological materials, both prehistoric and historic, and these materials could be affected by the alternatives. Therefore, the impact topic of archeology is included for further analysis.

Cultural Landscapes

As described by the NPS *Cultural Resource Management Guideline* (Director's Order – 28), a cultural landscape is,

... a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.

The preserve is listed as a national historic landmark and represents the ranching history of the area. Proposed construction of new facilities would result in new features on the landscape and may impact the theme for which the preserve lands were nominated. Therefore, the impact topic of cultural landscapes is included for further analysis.

Soils

Both the no-action and proposed action alternatives would involve construction of facilities within the preserve that would impact soils and their productivity. Therefore, the impact topic of soils is included for further analysis.

Prime and Unique Farmlands

In 1980, the Council on Environmental Quality directed federal agencies to assess the effects of their actions on farmland soils classified as prime or unique by the U.S. Department of Agriculture, Natural Resources Conservation Service. Prime or unique farmland is defined as soil, which particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. Two soil units within the preserve, Martin and Reading (Gay Spencer, NRCS, pers. comm.), are considered “prime farmland” soil, which are present in the areas proposed for construction of the visitor, administrative, and maintenance facilities, and may be affected by the proposed action; therefore, the impact topic of prime and unique farmlands is included for further analysis.

Vegetation

Tallgrass prairie that once covered much of the eastern Plains has been reduced to a fraction of its original extent; only about 4% of the original total remains. The preserve also contains various other types of vegetation. Both the no-action and proposed action alternatives would involve construction of facilities within the preserve, which would impact vegetation. Therefore, the impact topic of vegetation is included for further analysis.

Threatened and Endangered Species

The Endangered Species Act (1973), as amended, requires an examination of impacts on all federally listed threatened or endangered species. NPS policy also requires examination of the impacts on federal candidate species, as well as state-listed threatened, endangered, candidate, rare, declining, and sensitive species. The stream that lies to the south of the proposed visitor center / administrative parcel lies within the range of the endangered Topeka shiner (*Notropis topeka*). Therefore, the impact topic of threatened and endangered species is included for further analysis.

Wildlife

Policies of the National Park Service seek to protect the systems and processes of naturally occurring biotic communities, including the natural abundance, diversity, and ecological integrity of plants and animals (NPS *Management Policies* 2006). Both the no-action and proposed action alternatives would involve construction of facilities within the preserve, which would impact the various species of wildlife temporarily and to some degree permanently. Therefore, the impact topic of wildlife is included for further analysis.

Visitor Experience/Appreciation

Both alternatives propose construction of new visitor facilities, which will change visitor experience and appreciation of the preserve. Therefore, the impact topic of visitor experience/appreciation is included for further analysis.

Scenic Quality

Both alternatives propose construction of new visitor facilities, which would result in new features on the landscape. The proposed construction sites are visible from numerous locations within and outside the preserve boundary. Therefore, the impact topic of scenic quality is included for further analysis.

Water Quality

The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, is a national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters; to enhance the quality of water resources; and to prevent, control, and abate water pollution. NPS *Management Policies* 2006 provide direction for the preservation, use, and quality of water in national park units. The proposed construction sites are within the Fox Creek watershed and may contain surface- and groundwater resources. Therefore, the impact topic of water quality is included for further analysis.

Floodplains

Executive Order 11988 (*Floodplain Management*) requires federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. A small portion of the maintenance facility parcel proposed to be redesignated as visitor information and orientation area is located within the 100-year floodplain of Fox Creek; therefore, the impact topic of floodplains is included for further analysis.

Preserve Operations

Both alternatives propose construction of new facilities that would change current preserve operations; however, the location of those facilities varies by alternative. Therefore, the impact topic of preserve operations is included for further analysis.

Impact Topics Dismissed from Further Analysis

Some impact topics have been dismissed from further analysis because the proposed action would have no impact or a negligible impact on them.

Wetlands

Executive Order 11990 (*Protection of Wetlands*) requires federal agencies to avoid, where possible, adversely impacting wetlands. NPS Director's Order – 77-1: *Wetland Protection* (NPS 2002), also directs the National Park Service to avoid or minimize adverse impacts to wetlands from new development of facilities, or to compensate for unavoidable impacts via restoration of degraded wetlands. Actions proposed by the National Park Service that have the potential to have adverse wetlands impacts must be addressed in environmental documents. If

the preferred alternative in an environmental assessment would result in adverse impacts on wetlands, a statement of findings for wetlands must be prepared. There are no wetlands on either parcel being considered for the new visitor center, administrative, and maintenance facilities. No wetlands would be disturbed or adversely affected by the proposed action; therefore, wetlands is dismissed as an impact topic in this GMP revision.

Air Quality

Section 118 of the Clean Air Act of 1963, as amended, requires preserve managers to meet federal, state, and local air pollution standards. It also classifies units of federally owned lands into different air quality classes. NPS *Management Policies* 2006 address the need to analyze potential impacts to air quality during preserve planning. Tallgrass Prairie National Preserve, if federally owned, would be considered a class II air quality area under the Clean Air Act (NPS 2000).

Earthwork, material hauling, and other construction-related activities could result in temporarily increased vehicle exhaust and emissions. However, hydrocarbons, nitrous oxide, and sulfur dioxide emissions, as well as airborne particulates from fugitive dust plumes, would generally be rapidly dissipated by prevailing winds. Air quality could be degraded locally, but this effect would be negligible and temporary, lasting only until construction was completed. Effects would be controlled and mitigated, and no long-term change in air quality would be expected. Design guidelines include provisions for orienting bus lanes so that exhaust would be emitted away from pedestrian areas. Despite an anticipated increase in bus traffic, impacts to air quality are expected to be negligible over the long term. Thus, air quality is dismissed as an impact topic in this GMP revision.

Ecologically Critical Areas, Wild and Scenic Rivers, Other Unique Natural Areas

Tallgrass Prairie National Preserve was set aside to preserve some of the last remaining tall-grass prairie in North America. Impacts to tallgrass prairie are discussed in the “Vegetation” topic in the “Environmental Consequences” section. Impacts to the Topeka shiner and its habitat are discussed in the threatened and endangered species topic under the “Environmental Consequences” section. There are no other specifically designated unique natural areas within the preserve, or areas that have been designated as ecologically critical, or designations of wild and scenic rivers. Because there would be no impacts to resources in these categories, other than vegetation and endangered species, the topics of ecologically critical areas, wild and scenic rivers, and other unique natural areas are dismissed as impact topics in this GMP revision.

Soundscapes

In accordance with NPS *Management Policies* 2006 and Director’s Order – 47: *Sound Preservation and Noise Management* (NPS 2000b), an important part of the NPS mission is preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate

of all natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequency, magnitude, and duration of human-caused sound considered acceptable varies among NPS units, as well as throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

Hauling material, operating construction equipment, and other construction-related activities would result in human-caused sound. However, construction activity for new facilities would occur in an area where human-caused sound (e.g., highway traffic) is part of the background sound environment. Sounds from construction activities would be temporary, lasting only until facility development is completed. Sounds would occasionally be expected from activities (e.g., carpentry and plumbing work) at the new maintenance facility. Maintenance facilities are located close to Strong City, where human-caused sounds (e.g., highway traffic, trains, and other human activities) are part of the background sound environment. Sounds from construction activities or associated with the proposed facilities and transportation shuttle would not interfere with the ability of wildlife to define territories, attract mates, locate prey, navigate, or detect predators (and other dangers). Because the new NPS facilities would be located in an area where human-caused sound is part of the existing background sound environment, and because any construction-related or maintenance-related sounds would be negligible (and in the case of construction noise, short term), soundscapes is dismissed as an impact topic in this GMP revision.

Night Skies

In accordance with NPS *Management Policies* 2006, the National Park Service strives to preserve natural ambient lightsapes, which are natural resources and values that exist in the absence of human-caused light. Commercial, residential, and agricultural development could introduce light into otherwise naturally dark areas.

Within the preserve and surrounding area, night skies contain little human-caused light. Human-caused light is greatest near Strong City and U.S. 50. Some light sources originate from headlights along SH 177, residences and ranches along preserve boundaries, and Spring Hill / Z Bar Ranch Headquarters (additional security lighting was installed in the late 1990s). These areas are directly visible from vantage and viewing points within the preserve.

The proposed action would bring new light sources into the preserve south of the Spring Hill / Z Bar Ranch Headquarters along SH 177, and near the sewage lagoons. Currently, both of these areas contain human-caused light sources. The National Park Service minimizes extraneous light sources and protects the dark night sky by using shielded lighting, downward-directed lighting, and strategically located light sources. Because of such efforts and the largely rural and undeveloped landscape surrounding the preserve, there are outstanding opportunities to see the stars, moon, and planets on clear nights. Impacts to night skies would be negligible, long-term, and adverse. The expanse of sky that can be experienced at night within the preserve will continue to offer a unique experience. Based on this analysis, night skies is dismissed as an impact topic in this GMP revision.

Ethnographic Resources

Ethnographic resources are defined as any “site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it.” The National Historic Preservation Act, as amended, and Director’s Order – 28: *Cultural Resource Management Guideline* (NPS 1997) require consideration of impacts on ethnographic resources.

American Indian tribes culturally affiliated with the lands of Tallgrass Prairie National Preserve include the Kaws, Wichitas, Pawnees, and Osages. These tribes were notified of the proposed action in a letter dated October 28, 2003, and again in 2006. One tribe, the Osage, responded to the scoping letter, indicating that the southern area of the preserve could have religious or cultural significance since it is within the former Osage Reservation and homeland. The tribe requested that if bone, pottery, chipped stone, etc., are exposed during construction, that activities cease and the tribe be contacted. These measures are included in the mitigation section of this document.

In general, traditionally affiliated tribes are concerned that construction activities could uncover human remains, funerary objects, sacred objects, or objects of cultural patrimony. Construction activities associated with the proposed action could uncover such items, although the probability of this occurring is considered very low (Jones 2004). However, in the event that any human remains or other objects are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 would be followed.

The 2000 GMP states that “minor impacts on previously unidentified ethnographic resources could be caused by construction”; however, an ethnographic study has not been conducted at the preserve. Copies of this GMP revision will be sent to each affiliated tribe for review and comment. If additional issues or concerns are identified, appropriate consultations would be undertaken. Because it is unlikely that ethnographic resources would be affected and because steps would be taken to protect any human remains or other objects, the impact to ethnographic resources would be negligible; thus, ethnographic resources is dismissed as an impact topic in this GMP revision.

Museum Collections

NPS *Management Policies* 2006 and NPS Director’s Order – 28: *Cultural Resource Guideline* (NPS 1997) require that impacts on museum collections (historic artifacts, natural specimens, and archival and manuscript material) be considered in environmental documents.

Both the National Park Service and the National Park Trust acquired cultural resource collections. The National Park Service and The Nature Conservancy are now the joint stewards of the former National Park Trust collection. Most items (numbering in the hundreds) formerly owned by the National Park Trust are stored and/or exhibited at the Spring Hill / Z Bar Ranch Headquarters in the ranch house, barn, curing room, and school house (e.g., farm equipment, machinery, dishes, furniture, and books). Some of the NPS and Nature Conservancy artifacts on loan to the National Park Service are stored at the NPS Midwest Archeological Center in

Lincoln, Nebraska. Two additional items (a historic map and ledger) are also on loan and are stored at Fort Scott National Historic Site in southeast Kansas.

Museum collections will not be curated at the preserve because the NPS Midwest Regional Office has developed a regional museum curation and collection management plan for the preserve. Therefore, there is no impact to museum collections and museum collections are dismissed as an impact topic in this GMP revision.

Environmental Justice

Executive Order 12898 (*Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations*) requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of federal programs and policies on minority and low-income populations and communities. The proposed action would not have disproportionate or adverse impacts on minorities or economically disadvantaged populations.

Executive Order 13045 (*Protection of Children from Environmental Health Risks and Safety Risks*) requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of federal programs and policies on children. The proposed action would not have disproportionate or adverse impacts on children; thus, environmental justice is dismissed as an impact topic in this GMP revision.

Indian Trust Resources

Secretarial Order 3175 (*Indian Trust Assets*) requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian tribes.

There are no Indian trust resources on Tallgrass Prairie National Preserve. The lands comprising the preserve are not held in trust by the secretary of the interior for the benefit of Indians due to their status as Indians. Therefore, there would be no impact to Indian trust resources under any of the alternatives, and Indian trust resources are dismissed as an impact topic in this GMP revision.

Socioeconomic Environment

Implementation of the 2000 GMP, which includes construction of the new visitor center and administrative facilities, would have little or no impact on the region's socioeconomic environment (NPS 2000). Construction of new facilities may create some opportunities for employment regionally, but impacts would be negligible and temporary (lasting only until construction is completed).

If the alternative B sites were selected as the site for new facilities and if the National Park Service acquired this site from The Nature Conservancy (owner), rather than leasing it over the long term, this land (approximately 11.5 acres) would be removed from county tax roles. The annual county tax revenue generated by this land is estimated at \$30 per year (NPS 2004a). To compensate local governments for loss of tax revenue, 31 USC 6904 provides that the federal government shall make a payment in lieu of taxes to the local government that is equal to 1% of the fair market value of the land (not to exceed the amount of real property taxes levied on the property during the last fiscal year in which the land was acquired). The law provides that the payment in lieu of taxes shall be made for the five fiscal years after that in which the land is acquired.

Between 1998 and 2006, the preserve has averaged 18,662 visitors per year (Steve Miller, National Park Service, pers. comm. 2007). In 2006, preserve visitation was at its highest level. Visitation is anticipated to increase with the opening of the visitor center. Long-term visitation levels are also anticipated to increase as the preserve further develops and activities expand and increase. Local communities would benefit from other visitor services including a grocery store, fuel service, specialty shops, auto repair, etc. These impacts are addressed in the 2000 GMP and are not expected to differ from this analysis; and because any impacts would be negligible, the socioeconomic environment is dismissed as an impact topic in this GMP revision.

Hazardous Materials

Initial ground observations in the study area conducted by preserve staff have not found any evidence of hazardous waste or materials. Hazardous wastes that are sometimes associated with ranches include herbicides, pesticides, paints, solvents, and fuels. These parcels are not expected to have waste dumps containing hazardous materials.

However, the National Park Service would conduct a phase 1 (and if necessary, phase 2) environmental baseline survey of the parcels prior to acquiring any new property. Because of the low potential for the presence of hazardous wastes and materials, hazardous materials are dismissed as an impact topic in this GMP revision.

Health and Safety

The potential for grassland wildfires is an increasing concern as the preserve develops and visitation increases. The 2000 GMP recommended that in the future, access to all areas could be restricted during periods of high or extreme fire danger. The emergency response from the Chase County Volunteer Fire Department is considered good and has been estimated to be within 12–15 minutes. Local authorities provide emergency medical services, law enforcement support, and initial response for containing prairie fires. The alternatives would not change the potential for wildland fires. Under the preferred alternative, the preserve staff would be more readily available to respond to accidents and incidents. This would result in a negligible beneficial effect; therefore, health and safety is dismissed as an impact topic in this GMP revision.

ALTERNATIVES

Two alternatives are assessed in this GMP revision; alternative A, the no-action alternative and alternative B, the preferred alternative. The no-action alternative is the current management direction for the Tallgrass Prairie National Preserve, and is the selected alternative as discussed in the 2000 GMP. The preferred alternative is the proposed revision to the GMP. Because many of the actions described in the 2000 GMP have yet to be implemented, including the construction of the new visitor center and administrative and maintenance facilities, the reader is referred to the original GMP for a description of the baseline environmental conditions.

ALTERNATIVE A: NO-ACTION ALTERNATIVE

The no-action alternative would implement the preferred alternative from the 2000 GMP. Selection of the no-action alternative would represent continuation of the current management direction, which has not been implemented.

Under the no-action alternative, the 2000 GMP would not be revised, and a new visitor center, administrative, and maintenance facilities would be constructed for Tallgrass Prairie National Preserve in accordance with the direction provided in the 2000 GMP.

The 2000 GMP designates 82 acres as a visitor information/orientation management area (see figure 2) near the intersection of SH 177 and U.S. 50. The site is north of County Road (CR) 277. The parcels (owned by The Nature Conservancy) available for construction are currently undeveloped and generally undisturbed. Please see appendix E for an analysis of possible construction sites.

Site Development / New Facilities

New facilities construction for the preserve would include a visitor center, administrative headquarters, a maintenance facility, and a transportation system support facility.

The visitor center would include a visitor orientation and information desk, room for interpretive exhibits, a small auditorium, a book sales area, a multipurpose room, restrooms, and other storage and support rooms. Visitor parking, an amphitheater, and space for exhibits would also be provided outdoors. A transportation staging area (for boarding and exiting shuttle buses to the historic Spring Hill / Z Bar Ranch Headquarters and perhaps into the preserve) would be associated with the visitor center.

The administrative headquarters would include offices for Tallgrass Prairie National Preserve and partnership staff, museum collections work space, and miscellaneous other storage and work spaces for the preserve. Parking for staff and others conducting business at the administrative headquarters would be also provided.

The maintenance facility would include shops (for carpentry, electrical, and plumbing work, etc.), a fire fighting equipment cache, vehicle storage space, hazardous materials storage space, and other miscellaneous storage and support areas.

The transportation system support area would include a parking area for shuttle vehicles and workers, vehicle maintenance and wash areas, two offices, a hazardous materials area, and other support areas.

Utility support for the new facilities would include a connection to the preserve's new potable water delivery system, electrical supply lines, telephone and other communications connections, natural gas, stormwater disposal, and a connection to the Strong City sewage treatment facility.

Site Analysis

The site for the new facilities is undeveloped, generally undisturbed, and is covered in tallgrass prairie vegetation. The landscape slopes gently toward the northeast, with exposed bedrock in some areas.

To the north of the triangle-shaped site is a drainage swale that separates it from the privately owned St. Anthony Cemetery. To the east, at the bottom of the slope, is the Fox Creek bottomland and the Bottomland Trail. To the southwest is a gravel county road. Prevailing winds are from the southwest, with winter winds from the northwest (figure 3).

There are excellent views to the east and northeast, and relatively poor views to the south and west.

ALTERNATIVE B: PREFERRED ALTERNATIVE

The preferred alternative consists of revising two management areas from the 2000 GMP and a site development study for construction of a new visitor center, administrative, and maintenance facilities.

General Management Plan Revision

The 2000 GMP proposed two parcels for construction of the new visitor center, administrative, and maintenance facilities, to be located within management areas designated as the Flint Hills ranching legacy area. This area serves as the primary focal point for interpretation of ranching in the Flint Hills region, and as such, is not compatible with the proposed construction of the new visitor center, administrative, and maintenance facilities. Therefore, as part of the preferred alternative, a revision to the 2000 GMP is proposed to redesignate these parcels as the visitor information and orientation area. The visitor information and orientation area is the visitor focal point and the first stop for interpretation of preserve resources and orientation to the preserve. The two parcels total approximately 13 acres.

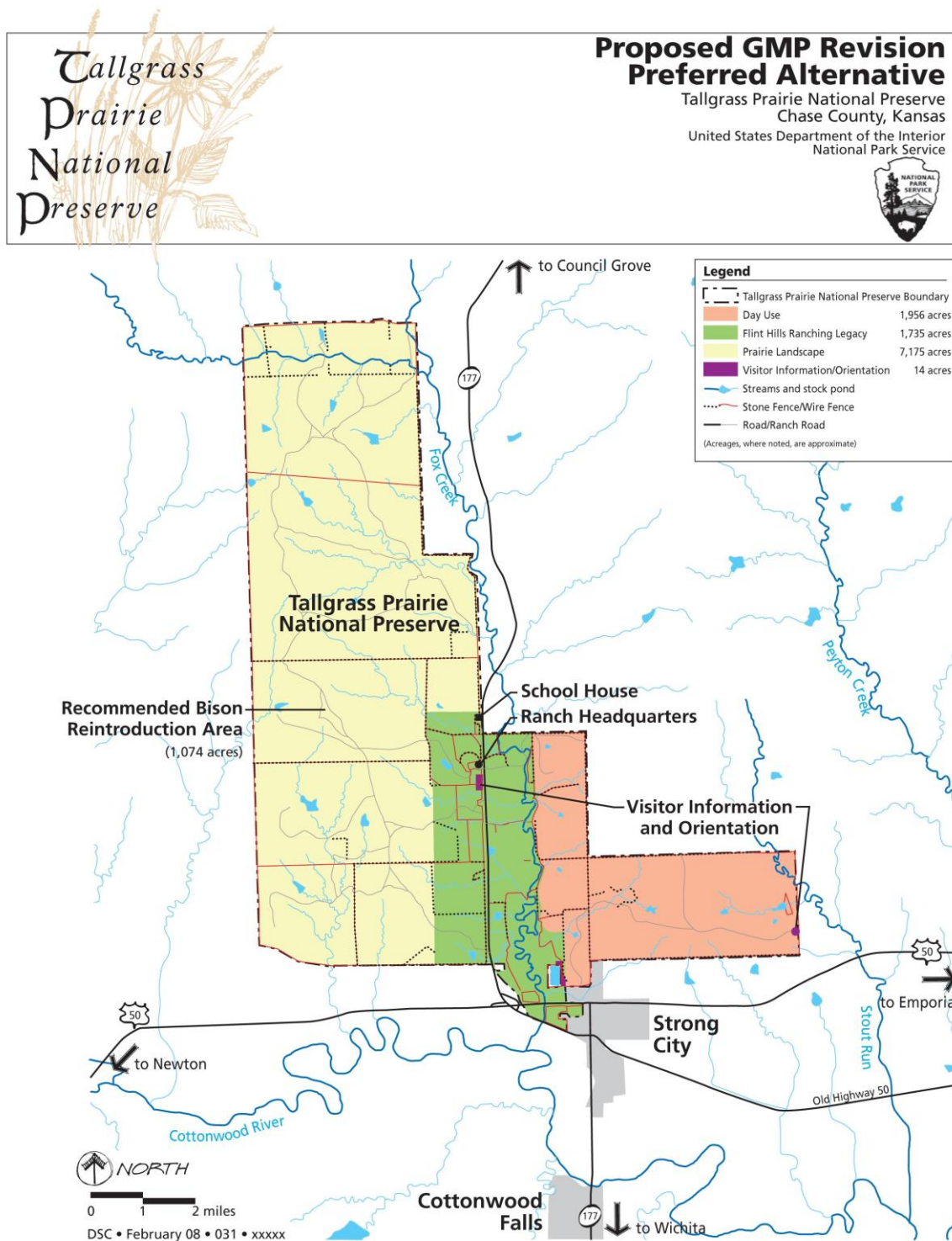


FIGURE 3. PROPOSED GMP REVISION

Also as part of the GMP revision, approximately 81 acres designated as the visitor information and orientation area in the 2000 GMP (north of the intersection of SH 177 and U.S. 50) would be redesignated as the Flint Hills ranching legacy area (figure 3). However, the Flint Hills ranching legacy area would also be reduced by approximately 13 acres through redesignation as a visitor information and orientation area. The Flint Hills ranching legacy area would increase from 1,667 acres to 1,735 acres, a net increase of approximately 68 acres. There is one acre along the county road on the eastern boundary of the park designated Visitor Use and Information area that the 2000 GMP envisioned to be used for a pull-out and informational kiosk. Therefore, the total Visitor Information and Orientation area acreage proposed as a part of this GMP revision would be 14 acres, a net reduction of 68 acres.

The preferred alternative includes the proposed redesignation of management areas established in the 2000 GMP. This GMP revision, therefore, analyzes the effects of the decision to change the management area designation of an 81-acre parcel northeast of the intersection of U.S. 50 and SH 177 from “available for construction of major preserve facilities” to “no major construction allowed within this area.”

Site Development/New Facilities

Under the NPS preferred alternative, a new combined visitor information and administrative center and a separate maintenance facility would be constructed on within two different parcels located within the preserve boundary (figure 4). The visitor information and administrative center would be located on approximately 7.0 acres south of the ranch headquarters along the west side of SH 177. The maintenance facilities would be located on approximately 6.0 acres along CR 227, east of the sewage lagoons. Space estimates for the buildings and structures is estimated at 1.7 acres for the combined visitor information and administrative center and 2.3 acres for the maintenance facilities (see table 2 in chapter 1). The proposed management areas are slightly larger to provide flexibility in layout and location of facilities, as necessary.

New facilities for the preserve would include a visitor center, administrative headquarters and associated parking; and a maintenance facility. The visitor center and administrative headquarters would be colocated near the historic Spring Hill / Z Bar Ranch Headquarters, while the maintenance facilities would be located east of the sewage lagoons.

The visitor center would include a visitor orientation and information desk, room for interpretive exhibits, a small auditorium, a book sales area, a multipurpose room, a small museum collections handling and storage area, restrooms, and other storage and support rooms. Visitor parking, an amphitheater, and space for exhibits would be provided outdoors. A transportation staging area (for boarding and exiting shuttle buses) would be associated with the visitor center.

The administrative headquarters would include offices for Tallgrass Prairie National Preserve, The Nature Conservancy staff, and Kansas Park Trust, and, and miscellaneous other storage and work spaces for preserve operations. Parking for staff and others conducting business at the administrative headquarters would be provided.

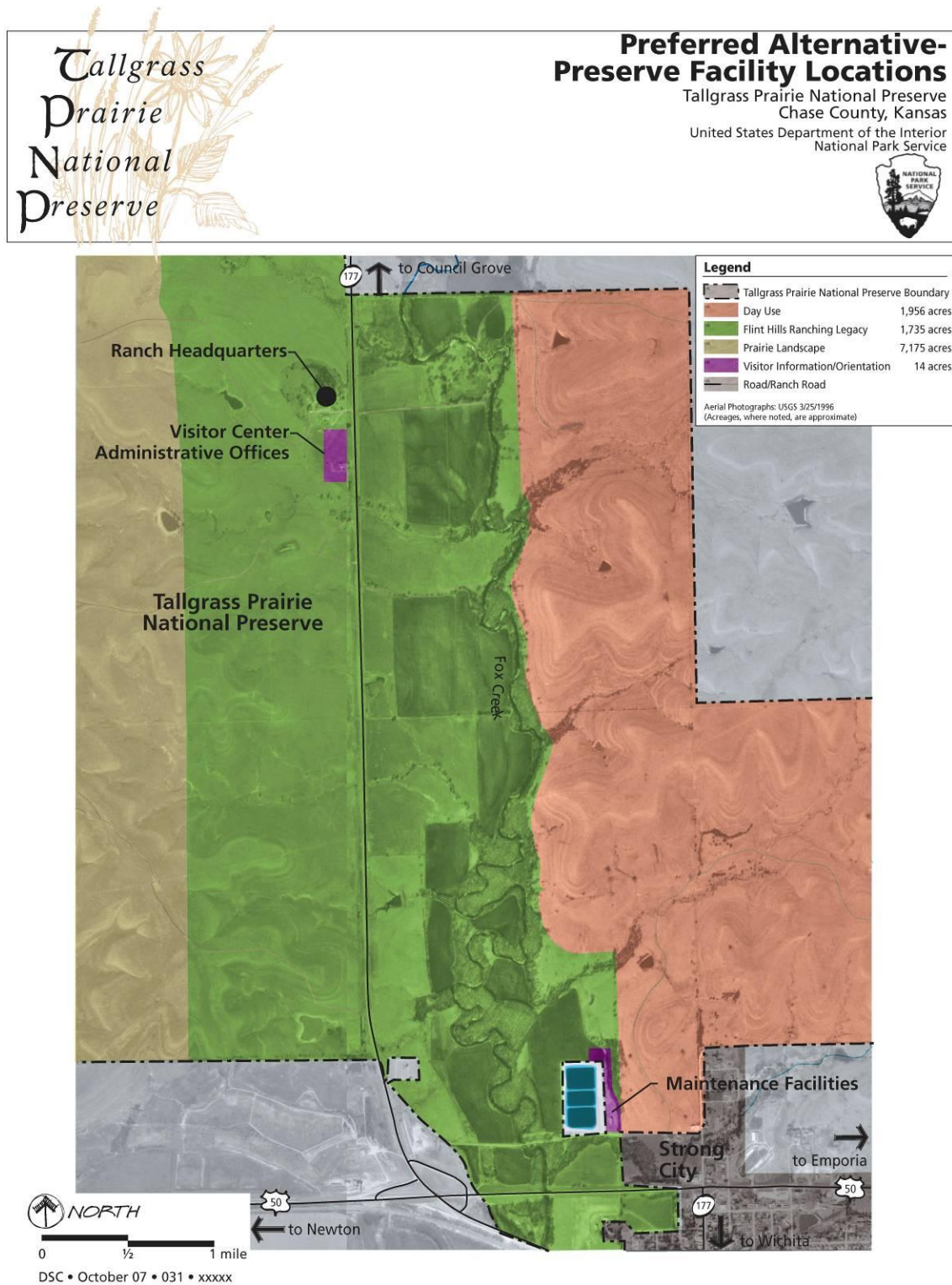


FIGURE 4. PROPOSED PRESERVE FACILITY LOCATIONS

The maintenance facility would include shops (for carpentry, electrical, and plumbing, etc.), a fire fighting equipment cache, vehicle storage space, hazardous materials storage space, and other miscellaneous storage and support areas. This area would also include a parking and storage area for shuttle vehicles, vehicle maintenance and wash areas, a fueling area, and other support areas.

Utility support for the new facilities would include a connection to the preserve's new potable water delivery system, electrical supply lines, telephone and other communications connections, natural gas, alternative fuels service, stormwater disposal, and a connection to the Strong City sewage treatment facility.

Approximately 4.4 acres would be needed to construct the visitor information and administrative center and associated parking, and approximately 2.8 acres would be required for the maintenance facilities. The remaining portions of the parcels (2.6 and 3.2 acres, respectively) would be used for setbacks and landscaping. Additional space modeling details are provided in the "Development Program" section and appendix B.

Site Analysis

The parcels for the new facilities were previously developed and/or disturbed. A site analysis of the parcels for the new facilities is depicted in figure 5. The visitor information and administrative center parcel is in the area of a mid-1930s ranch structures that have been removed. It is located approximately 2 miles north of the intersection of SH 177 and U.S. 50, along the west side of SH 177. The ground cover is generally described as "go back" prairie, with intact native prairie along the creek. The site slopes southward and has good solar exposure. Prevailing winds are generally from the south and southwest, and winter winds are from the northwest. There is adequate space for construction outside the floodplain, and there are no wetlands. Visitors would have access to the east side of the preserve via an existing cattle underpass below SH 177. There are good views to the east, south, and north of the ranch headquarters, and relatively good, but limited, views to the west.

The maintenance facility site is located east of and adjacent to the sewage lagoons. The ground cover is previously disturbed from construction of the sewage lagoons and an existing storage structure. The facilities can be constructed outside the floodplain. Views of the site from the day use area are shielded by trees. The site can be accessed from the east or west along CR 227, and is 0.5 mile from Strong City.

Design requirements for the proposed facilities that would reduce visual and other potentially adverse impacts are detailed below.

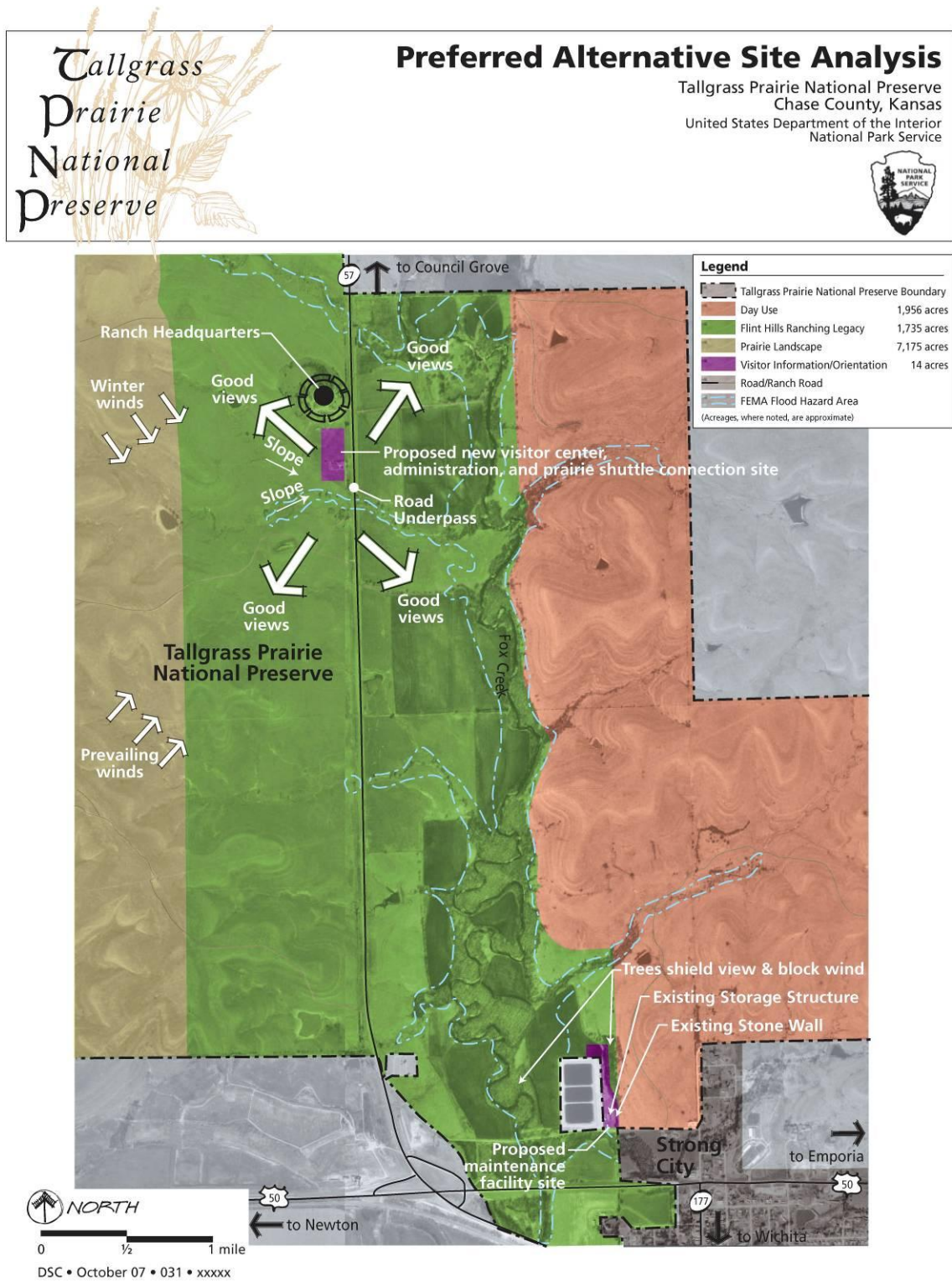


FIGURE 5. PREFERRED ALTERNATIVE SITE ANALYSIS

MITIGATION MEASURES FOR THE NO-ACTION AND PREFERRED ALTERNATIVES

The mitigation measures described in this section would apply to the preferred alternative. Impact analyses in the “Environmental Consequences” section are based on these mitigation measures being fulfilled.

Once a preferred site for the new facilities is approved, and before planning and design of the new facilities proceeds, a site visit by a qualified hydrologist would be conducted to ensure that floodplain parameters are fully understood and floodplain guidelines are met as outlined in the “Floodplains” section, and as specified by NPS Director’s Order – 77-2: *Floodplain Management* (NPS 2003a). The 100-year and 500-year floodplain would be mapped and delineated, and all construction would be located outside floodplain areas (Directors Order – 77-2: *Floodplain Management*).

A stormwater pollution prevention plan would be prepared, as required by the National Pollutant Discharge Elimination System (NPDES) permit process. This plan would outline specific measures for prevention, minimization, and mitigation of soil erosion and water pollution during construction activities. The construction contractor would be responsible for developing a NPS-approved plan. The plan would be available for public and agency inspection at the construction site. A Kansas Department of Health and Environment authorization for stormwater runoff would be required. A state water pollution control permit would also be required if facilities are not directed to a city sanitary sewer.

Land clearing and non-building construction activities would be scheduled, to the greatest extent practicable, to avoid the Topeka shiner spawning season.

If, during construction, any previously unknown archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed in consultation with the Kansas state historic preservation office (SHPO) and other appropriate consulting parties, including affiliated tribes. Should inadvertent discoveries of human remains be uncovered during construction, all work would be halted in the discovery area, the site secured, and preserve staff would consult according to 36 CFR 800.13, and as appropriate, provisions of the Native American Graves Protection and Repatriation Act of 1990. In compliance with this act, the National Park Service would also notify and consult concerned American Indian tribal representatives for the proper treatment of human remains, funerary, and sacred objects should these be discovered during the project.

Construction zones would be identified and fenced with temporary fencing or a similar material prior to construction activity. Fencing would define the construction zone and confine activity to the minimum area required. Protection measures would be clearly stated in construction specifications and workers would be instructed to avoid areas beyond fences.

Measures to control dust and erosion during construction would be implemented and would include:

- Use of water sprinkling on dry soils.
- Construct silt fences and sedimentation basins.
- Stabilize soils during and after construction with specially designed fabrics, certified straw, or other materials.
- Cover haul trucks.
- Revegetate disturbed areas with native species as soon as possible after construction.

To maximize restoration after construction activities are completed, the following measures would be implemented:

- Salvage topsoil from construction areas for reuse during restoration on disturbed areas to ensure revegetation, as appropriate.
- Salvage native vegetation for subsequent replanting in disturbed areas, as appropriate.
- Monitor revegetation success following construction and implement remedial and control measures, as needed.

To prevent the introduction of and to minimize the spread of nonnative vegetation and noxious weeds, the following measures would be implemented:

- Minimize soil disturbance.
- Limit vehicle parking to existing roads, parking areas, or previously disturbed areas.
- Obtain all fill, rock, or additional topsoil from the project area, if possible.

The design team would consult with the Kansas Department of Transportation (KDOT), county engineers, and other entities, as appropriate, before beginning the design phase to discuss access and egress issues related to the new facilities. Consulting with these parties before design begins would ensure that road and highway safety issues are considered and that any safety-related road modifications (turn lanes, traffic signals, or signs, etc.) are designed in concurrence with the new preserve facilities.

The design team would consult with the USFWS during design and construction to ensure that indirect effects, primarily erosion and runoff into Fox Creek and its tributary would not adversely affect the Topeka shiner. At a minimum, a retention pond would be constructed to capture runoff from parking areas.

Once the design for the facilities is completed, the National Park Service may be required to obtain a general construction stormwater permit for authorization to discharge stormwater associated with construction activity under the NPDES

The design team would also consult with the Kansas SHPO during the design phase to ensure that adverse effects to the cultural landscape from construction of the visitor center,

administrative, and maintenance facilities are minimized, reduced, or avoided through appropriate design and layout.

The design team would incorporate the following design treatments and criteria:

1. The visitor center/administrative facility should reflect the rural vernacular architecture of the ranch Headquarters in footprint, scale, massing, and roofline.
2. The visitor center and administrative facilities should be built with visually compatible materials similar to those used during the NHL period of significance, have a simple façade, with few reflective surfaces. Consider period-appropriate materials such as metal and local stone. The use of these materials should reflect the historic craftsmanship in finish and styling. Within budget constraints, native limestone could be limited to architectural details. The overall use of materials would provide a thematic tie to historic structures.
3. The building can be sheltered from view using low earthen berms and vegetation screens. Berms should be moved away from the building and covered with natural materials such as prairie grasses and forbs.
4. HVAC and other utilities should be hidden to the maximum degree possible.
5. Facilities and building materials should be designed to be defensible against and resistant to wildland fires. Consideration should be given to using facility access roads and parking areas as firebreaks. The design should also take into account prevailing winds to reduce the impact of snow drifts in winter and to take advantage of cooling breezes.
6. Facilities should be landscaped with native prairie plants, primarily grasses and forbs. Landscape plants should only require a minimum amount of water in the first two years to become established. Retain as much existing vegetation, especially trees, as possible.
7. Views from the building should be oriented toward the south and east (toward the tallgrass prairie and Fox Creek). Views of the new facility from the historic ranch headquarters should be minimized, so as to reduce the visual intrusion of the contemporary facility on the cultural landscape associated with the NHL. The building should be sited so that it is visible to visitors approaching the site.
8. Parking areas should use as soft and permeable a surface as possible to reduce visual intrusions and capture runoff. Brightness and color of the paving materials should be factored into the overall goal of reducing visibility and reflection of the parking area. Parking areas and access roads should be simple and geometric to reflect vernacular parking arrangements typically found in rural landscapes.

9. Of all the new facilities and associated uses, the reflective windshields of parked vehicles have the most potential to be seen across long distances. Views of the parking lot and parked vehicles from the ranch headquarters and other key viewpoints must be minimized by using topography and vegetation.
10. The NPS guide, *Guiding Principles of Sustainable Design* (NPS 1994), will be used to establish sustainability goals for the project, and the project should strive for, at a minimum, a Silver LEED certification rating on new construction.
11. Modifications will be made to the SH 177 in order to provide safe egress to the proposed new visitor information and orientation area site. Site circulation should consider linkages between the highway, parking areas and Preserve trail system. Minimize the number of times visitors have to enter and exit the highway.
12. Visitor center and administrative facilities will be collocated and maximize efficiency of shared amenities as much as possible in order to reduce the footprint of the development.
13. Lighting in and around new facilities will be “best available design” and emphasize design for low impact.
14. Design bus parking areas so the exhaust from buses points away from visitor circulation areas. Parking design should also take into consideration screening and protection from wind and blowing snow.
15. Other construction-related permits, as necessary.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is determined by applying the criteria suggested in NEPA, which is guided by the Council on Environmental Quality. In order for an alternative to be environmentally preferred, it must meet the criteria established in section 101(b) of NEPA and subsequently adopted by the National Park Service. An alternative must meet the following criteria to be considered an environmentally preferred alternative:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.

- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Each of the alternatives meets criteria 1, 3, and 5 equally well.

Although each of the alternatives meets criterion 2 in terms of ensuring a safe, healthful, and productive surrounding, the preferred alternative has a slight advantage in ensuring an esthetically and culturally pleasing surrounding by placing the visitor center in a location that affords better views of the surrounding prairie and historic corrals and developing the maintenance facility in an area removed from visitor activities.

The development of visitor facilities according to the 2000 GMP would best preserve important historic and cultural aspects of our national heritage (criterion 4), although alternative B could, to a lesser degree, provide for preservation of our national heritage. Construction of new facilities under alternative B would have adverse impacts on cultural resources by placing new structures within a cultural landscape. Thoughtful siting, implementation of mitigation measures in the design of the new facilities, and the use of a previously disturbed site would lessen the degree of adverse impacts.

Though each of the alternatives would meet criterion 6, alternative B has a slight advantage in minimizing the use of depletable resources. Each alternative would strive to construct the most sustainable facilities possible, adhering to NPS guidelines for obtaining, at a minimum, silver LEED certification on new construction. In alternative B, an existing pole shed would be incorporated into the new maintenance facility to the greatest degree possible, and reduce the use of fossil fuels by locating the visitor center within walking distance of the historic ranch headquarters, one of the primary visitor attractions. The no-action alternative may increase the amount of traffic on adjacent roadways because of the location of primary visitor services away from the ranch headquarters.

The National Park Service has determined the environmentally preferable alternative is the preferred alternative (alternative B). Although some specific actions of the other alternative might achieve levels of protection for certain cultural resources better than alternative B, in aggregate, this alternative would best achieve the six prescribed conditions listed above.

ALTERNATIVES CONSIDERED BUT DISMISSED FROM DETAILED ANALYSIS

Ten alternative sites for the new NPS facilities were originally identified and evaluated by the planning team. The team evaluated the original sites against 18 criteria ranging from "convenient access for visitors" to "impacts on neighbors." Later, three additional sites suggested by the public were evaluated against the same criteria. Finally, in 2006, a new alternative was investigated based on input from The Nature Conservancy and the Kansas Park Trust. This final alternative is carried forward for detailed analysis; all others have been dismissed. Appendix E describes in detail the criteria and process used to evaluate and narrow the sites down to a select few, and the rationale for dismissing the various alternatives.

COMPARATIVE SUMMARY OF ALTERNATIVES

TABLE 3. ALTERNATIVE COMPARISON TABLE

Alternative A: No-Action Alternative	Alternative B: Preferred Alternative
<p>The no-action alternative would be implementation of the preferred alternative from the 2000 GMP. Selection of the no-action alternative would represent continuation of the current management direction, which has not been implemented. Under the no-action alternative, the 2000 GMP would not be revised, and the new facilities for Tallgrass Prairie National Preserve would be constructed in accordance with direction provided in the 2000 GMP on a parcel of land located just north of the intersection of SH 177 and U.S. 50.</p> <p>This site is owned by The Nature Conservancy. The parts of the site available for construction are undeveloped and generally undisturbed and within the visitor information and orientation area designated for new facilities by the 2000 GMP.</p> <p>New facilities for the preserve would include a visitor center, administrative headquarters, a maintenance facility, and a transportation system support facility.</p>	<p>The GMP revision would redesignate two parcels (totaling 13.0 acres) as visitor use and orientation management areas, which permits construction of facilities. A third 81-acre parcel northeast of the intersection of U.S. 50 and SH 177 would be redesignated as the Flint Hills ranching legacy area.</p> <p>Under the NPS preferred alternative, a new combined visitor center and administrative headquarters and a separate maintenance facility would be constructed on the two redesignated parcels within the preserve boundary.</p> <p>The visitor center and administrative headquarters would be located on approximately 7.0 acres located south of the ranch headquarters along the west side of SH 177. These facilities would occupy approximately 4.4 acres, including parking.</p> <p>The maintenance facilities would be located on 6.0 acres along CR 227, east of the sewage lagoons. These facilities would occupy approximately 2.8 acres.</p>
<p><u>Meets Project Objectives?</u></p> <p>No. The Nature Conservancy, a private nonprofit organization, owns the majority of Tallgrass Prairie National Preserve, and is a partner in the management of the preserve with the National Park Service. The management area designated for visitor and preserve operations facilities under the 2000 GMP is not compatible with The Nature Conservancy mission and objectives to preserve natural communities because a visitor center/administration facility would be constructed on pristine prairie.</p>	<p><u>Meets Project Objectives?</u></p> <p>Yes. The GMP revision would allow the National Park Service and The Natural Conservancy to meet their objectives to preserve the pristine prairie while accommodating visitors and providing opportunities for education.</p> <p>A visitor information center would provide the initial stop for visitors and allow them to orient themselves and plan their visit. It would also serve as a staging area for the public transportation system and for education and interpretation efforts. The administrative and maintenance facilities would provide adequate facilities to conduct and support preserve operations.</p>

TABLE 4. IMPACT SUMMARY TABLE

Impact Topic	No-action Alternative	Preferred Alternative		
		Visitor Center and Administrative Site	Maintenance Site	Addition to Flint Hills Ranching Legacy Area
Historic Structures	<ul style="list-style-type: none"> - beneficial long-term, minor to moderate impacts - would contribute minor long-term and beneficial to cumulative impacts 	<ul style="list-style-type: none"> - beneficial long-term minor to moderate impacts - would contribute negligible to minor long-term and beneficial to cumulative impacts 	<ul style="list-style-type: none"> - beneficial, long-term, minor to moderate impacts - would contribute negligible to minor long-term and beneficial to cumulative impacts 	<ul style="list-style-type: none"> - beneficial long-term negligible to minor impacts - would contribute negligible to minor long-term and beneficial to cumulative impacts
Archeology	<ul style="list-style-type: none"> - no or negligible impacts - would not contribute to cumulative impacts 	<ul style="list-style-type: none"> - adverse site-specific long-term negligible to minor impacts - would contribute negligible long-term adverse cumulative impacts 	<ul style="list-style-type: none"> - no impact - would contribute negligible long-term adverse cumulative impacts 	<ul style="list-style-type: none"> - negligible impact - would contribute negligible long-term adverse cumulative impacts
Cultural Landscapes	<ul style="list-style-type: none"> - adverse long-term and minor impacts; beneficial long-term and minor impacts - would contribute minor adverse long-term cumulative impacts 	<ul style="list-style-type: none"> - adverse long-term moderate impacts with mitigation measures - would contribute minor long-term and adverse to cumulative impacts 	<ul style="list-style-type: none"> - adverse long-term minor impacts - would contribute minor long-term and adverse to cumulative impacts 	<ul style="list-style-type: none"> - beneficial, long-term, negligible to minor, impact - would contribute minor long-term and adverse to cumulative impacts
Soils	<ul style="list-style-type: none"> - adverse short- and long-term and minor to moderate impacts - would contribute minor to moderate long-term and adverse to cumulative impacts 	<ul style="list-style-type: none"> - adverse localized short- and long-term negligible to minor impacts - would contribute negligible long-term and adverse to cumulative impacts 	<ul style="list-style-type: none"> - adverse localized short- and long-term negligible to minor impacts - would contribute negligible long-term and adverse to cumulative impacts 	<ul style="list-style-type: none"> - beneficial localized long-term minor impacts - would contribute negligible to minor long-term and beneficial to cumulative impacts

TABLE 4. IMPACT SUMMARY TABLE

Impact Topic	No-action Alternative	Preferred Alternative		
		Visitor Center and Administrative Site	Maintenance Site	Addition to Flint Hills Ranching Legacy Area
Prime and Unique Farmlands	<ul style="list-style-type: none"> - no impact 	<ul style="list-style-type: none"> - adverse site-specific short- and long-term moderate impacts - would contribute negligible adverse long-term impacts on regional level 	<ul style="list-style-type: none"> - adverse site-specific short- and long-term moderate impacts - would contribute negligible adverse long-term impacts on regional level 	<ul style="list-style-type: none"> - no impacts
Vegetation	<ul style="list-style-type: none"> - adverse short- and long-term minor to moderate impacts - would contribute minor short- and long-term adverse to cumulative impacts 	<ul style="list-style-type: none"> - adverse site-specific short- and long-term minor impacts. - would contribute a negligible adverse long-term impact to cumulative impacts 	<ul style="list-style-type: none"> - adverse site-specific short- and long-term negligible impacts. - would not contribute to cumulative impacts 	<ul style="list-style-type: none"> - beneficial localized long-term minor to moderate impacts - would contribute negligible to minor long-term beneficial to cumulative impacts
Threatened and Endangered Species	<ul style="list-style-type: none"> - no impacts - would not contribute to cumulative impacts 	<ul style="list-style-type: none"> - adverse short- and long-term negligible to minor impacts - with appropriate mitigation measures, would contribute negligibly to cumulative impacts 	<ul style="list-style-type: none"> - adverse short-term negligible to minor impacts - with appropriate mitigation measures, would contribute negligibly cumulative impacts 	<ul style="list-style-type: none"> - no impacts - would not contribute to cumulative impacts

TABLE 4. IMPACT SUMMARY TABLE

Impact Topic	No-action Alternative	Preferred Alternative		
		Visitor Center and Administrative Site	Maintenance Site	Addition to Flint Hills Ranching Legacy Area
Wildlife	<ul style="list-style-type: none"> - adverse short- and long-term minor to moderate impacts - would contribute minor short- and long-term adverse to cumulative impacts 	<ul style="list-style-type: none"> - adverse site-specific localized short-term negligible to minor impacts and long-term negligible impacts - would contribute negligible long-term and adverse to cumulative impacts 	<ul style="list-style-type: none"> - adverse localized short- and long-term negligible impacts - would contribute negligible long-term and adverse to cumulative impacts 	<ul style="list-style-type: none"> - beneficial long-term negligible to minor impacts - would contribute long-term, negligible, adverse impact where construction is proposed, and long-term, negligible to minor, beneficial impact with the addition of acreage in the Flint Hill ranching legacy area cumulative impacts
Visitor Experience / Appreciation	<ul style="list-style-type: none"> - beneficial long-term major impacts; adverse long-term minor impacts - would contribute major long-term beneficial to cumulative impacts 	<ul style="list-style-type: none"> - beneficial long-term moderate impacts - would contribute a beneficial long-term and moderate impact to cumulative impacts 	<ul style="list-style-type: none"> - beneficial long-term negligible to minor impact - would contribute a beneficial long-term negligible to minor beneficial impact to cumulative impacts 	<ul style="list-style-type: none"> - beneficial long-term negligible impacts - would contribute negligibly to cumulative impacts
Scenic Quality	<ul style="list-style-type: none"> - adverse long-term minor impacts with thoughtful siting and design - would contribute a minor long-term adverse impact to cumulative impacts 	<ul style="list-style-type: none"> - adverse long-term moderate impacts with thoughtful siting - would contribute a minor to moderate long-term and adverse impact to cumulative impacts 	<ul style="list-style-type: none"> - adverse long-term negligible impacts - would not contribute to cumulative impacts 	<ul style="list-style-type: none"> - beneficial long-term negligible impacts - would not contribute to cumulative impacts

TABLE 4. IMPACT SUMMARY TABLE

Impact Topic	No-action Alternative	Preferred Alternative		
		Visitor Center and Administrative Site	Maintenance Site	Addition to Flint Hills Ranching Legacy Area
Water Quality	<ul style="list-style-type: none"> - adverse long-term minor impacts - would contribute a minor long-term adverse impact to cumulative impacts 	<ul style="list-style-type: none"> - adverse short- and long-term minor impacts - would contribute a negligible to minor long-term and adverse impact to cumulative impacts 	<ul style="list-style-type: none"> - adverse short- and long-term negligible to minor impacts - would contribute a negligible to minor long-term and adverse impact to cumulative impacts 	<ul style="list-style-type: none"> - beneficial long-term negligible impacts - would not contribute to cumulative impacts
Floodplains	<ul style="list-style-type: none"> - no impact - would not contribute to cumulative impacts 	<ul style="list-style-type: none"> - no impact - would not contribute to cumulative impacts 	<ul style="list-style-type: none"> - no impact - would not contribute to cumulative impacts 	<ul style="list-style-type: none"> - no impact - would not contribute to cumulative impacts
Preserve Operations	<ul style="list-style-type: none"> - Beneficial minor to moderate long-term impacts - would contribute minor to moderate long-term beneficial impacts to cumulative impacts 	<ul style="list-style-type: none"> - beneficial long-term minor to moderate impacts - would contribute long-term minor to moderate and beneficial effects to cumulative impacts 	<ul style="list-style-type: none"> - beneficial long-term minor to moderate impacts - would contribute long-term minor to moderate and beneficial effects to cumulative impacts 	<ul style="list-style-type: none"> - no impacts - would not contribute to cumulative impacts

AFFECTED ENVIRONMENT

This section provides a description of the preserve and identifies resources potentially affected by the proposed action. Additional information on resources of Tallgrass Prairie National Preserve can be found in the 2000 GMP.

LOCATION AND GENERAL DESCRIPTION OF TALLGRASS PRAIRIE NATIONAL PRESERVE

Tallgrass Prairie National Preserve is located within the Flint Hills region of east-central Kansas. The preserve is in Chase County, north of Strong City, and 3 miles north of Cottonwood Falls. Kansas SH 177 runs north/south through the preserve and provides access to the historic Spring Hill / Z Bar Ranch Headquarters and many other features associated with the preserve. The preserve consists of 10,984 acres, the majority of which is owned by The Nature Conservancy.

OVERVIEW

This section provides a general review of each resource within the preserve. A more detailed discussion for each parcel proposed for construction is described under the headings “Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area” and “Proposed Maintenance Parcel and Visitor Information and Orientation Area.” Because of the proposed GMP revision, the parcel at the intersection of U.S. 50 and SH 177 is discussed in the “2000 GMP Proposed Addition to Flint Hills Ranching Legacy Area” section.

The preferred/selected alternative in the 2000 GMP designated 82 acres within the preserve as a visitor information and orientation area where development of the primary visitor information and orientation area would take place near Strong City, close to the junction of SH 177 and U.S. 50.

The visitor center / administrative parcel and visitor information and orientation area proposed under this GMP revision would be located on a 7-acre parcel south of the historic Spring Hill / Z Bar Ranch Headquarters, on the west side of Kansas SH 177.

The proposed maintenance parcel and visitor information and orientation area would be located on 6.0 acres of land in the southern portion of the preserve, due east of the Strong City sewage lagoons.

The parcel located north and east of the intersection of Kansas SH 177 and U.S. 50, designated as a visitor information and orientation area in the 2000 GMP and proposed to be redesignated as the Flint Hills ranching legacy area, contains approximately 81 acres.

HISTORIC STRUCTURES

The National Historic Preservation Act and NEPA require consideration of impacts on historic structures and buildings listed in or eligible for listing on the NRHP.

The preserve contains over 60 recorded structures and features. More historic structures are expected to be documented as additional survey work is accomplished. The known structures represent the evolution of farming, ranching, and rural lifeways from the mid-19th to mid-20th centuries. Of the 60 known structures, 38 were documented as part of the List of Classified Structures survey in 1997. The majority of the 38 structures are concentrated at the historic Spring Hill / Z Bar Ranch Headquarters. These structures, as well as the Lower Fox Creek School and 36 miles of stone fence, are built of local limestone.

The historic Spring Hill / Z Bar Ranch Headquarters complex was built in 1881 (figure 6) by ranch founder, Stephen Jones, on a bluff overlooking the Fox Creek valley, north of Strong City, Kansas. The complex includes the following structures: three-story (11-room) ranch house, three-story barn, springhouse / curing room, privy, icehouse, and poultry house / scratch house. In April 1971, the historic Spring Hill / Z Bar Ranch house was listed on the NRHP and was later incorporated into a larger national historic landmark (discussed below).

Proposed Visitor Center / Administrative Parcel and Visitor Information and Orientation Area

Historic features that may or may not be associated with ranching located near or in the vicinity of the parcel include concave spaces, fencing, and large earthen trench silos. These features may occur in the parcel and could be associated with ranching and the period of significance (Bahr Vermeer Haecker Architects 2004).

Proposed Maintenance Parcel and Visitor Information and Orientation Area

Historic features associated with this parcel include a stone fence and a historic metal pole barn dated to post-1938. Other features that may or may not be associated with ranching located near the parcel include former habitation sites, foundations, and stone fences (Bahr Vermeer Haecker Architects 2004).

Proposed Flint Hill Ranching Legacy Area Revision

Historical features in the landscape include fencing; remnant spur grades; stockyard pens, corrals, and associated features; roads and road traces; quarry sites; and landscape features (Bahr Vermeer Haecker Architects 2004). This area also includes the Bottomland Trail.

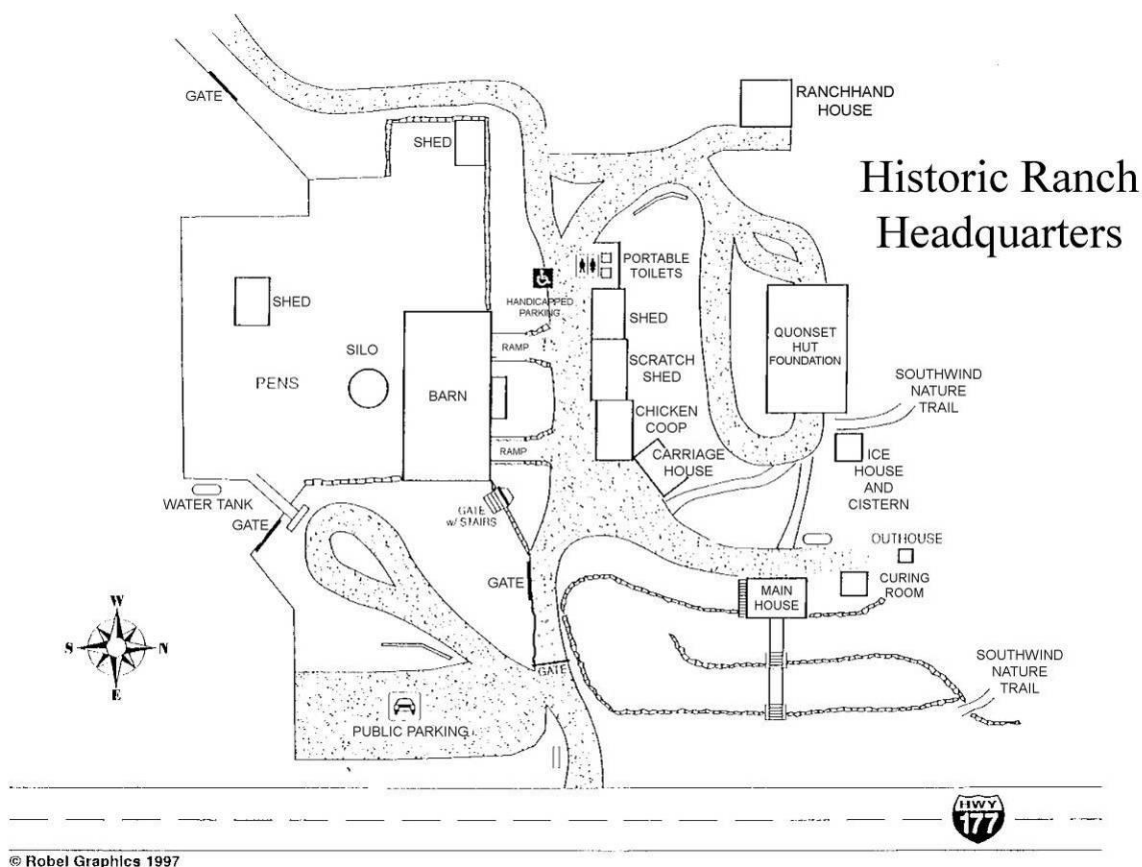


FIGURE 6. SPRING HILL / Z BAR RANCH HEADQUARTERS

ARCHEOLOGY

Relatively little is known about archeological resources in and around Tallgrass Prairie National Preserve. Field investigations conducted in 1998 addressed the small number of known, but mostly unrecorded sites, but these addressed only about 150 acres (less than 2% of the preserve). However, information gleaned from archeological records elsewhere in Morris and Chase counties suggests that a substantial number of archeological sites will eventually be recorded in the preserve. Documented archeological materials reflect 12,000 years of American Indian occupation and use of lands around the preserve. Paleo-Indian and Archaic remains are relatively uncommon. Later prehistoric occupations dating from roughly AD 1 to AD 1500 are much better represented (Jones 1999).

Prehistoric archeological site types expected to occur within the preserve include chert quarries and workshops, habitations/campsites, tipi rings, rock alignments, cairns, burial mounds, and other task-specific sites. It is also likely that the preserve will contain a small number of historic farmsteads or homesteads and a larger number of isolated farm- or ranch-related features (Jones 1999).

Proposed Visitor Center / Administrative Parcel and Visitor Information and Orientation Area

The potential for archeological resources within this parcel was evaluated using a formal file search from the Kansas State Historical Society in October of 2005, and a brief archeological investigation in November of 2005. The file search indicated that no previously recorded archeological sites are in the immediate vicinity of the parcel. The nearest recorded site is the historic Spring Hill / Z Bar Ranch Headquarters located north of the parcel.

The parcel was briefly evaluated for archeological and structural remains by pedestrian survey. Historic photographs indicated a simple, single-story structure with an outbuilding located within the parcel. The location of the structures were investigated and clear evidence of the location of the buildings was not observed; however, there is the potential for subsurface features and artifacts. The site has not been formally evaluated for listing on the NRHP.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

The potential for archeological resources within this parcel was evaluated using methods of a formal file search from the Kansas State Historical Society in October 2005, and a brief archeological investigation in November 2005. The file search indicated that no previously recorded archeological sites are in the immediate vicinity of the parcel.

Historic features in the area include a low stone fence along the east boundary and a barn located in the southern portion of the parcel. The stone fence likely dates to the late 19th century and the barn post-dates 1938, according to aerial photographs of the area. The barn has not been evaluated for NRHP eligibility (Jones 2005).

Shovel testing was used as a method to locate subsurface archeological material and to determine possible ground disturbance from construction of the sewage lagoons. The shovel tests were dug at 65-foot (20 meter) intervals to an approximate depth of 15 inches (40 centimeters [cm]) below the ground surface, which did not reach into lower soil horizons. The shovel tests were dug along a north-trending transect and along the stone fence alignment. No archeological materials were identified in the area of the parcel. Preliminary indications from shovel testing conclude that construction disturbance did not occur; however, past flooding of Fox Creek may have eroded away any prehistoric or historic occupations (Jones 2005).

Proposed Flint Hills Ranching Legacy Area Revision

Kansas State Historical Society records indicate that there are two recorded archeological sites in the general vicinity of this parcel. The first site (14CS105) is a prehistoric lithic scatter in a cultivated field adjacent to Fox Creek, located about 546 yards (500 meters) east of and beyond the limits of one of the two proposed parcels. Shovel testing near this site failed to discover cultural deposits and it was concluded that any evidence of prehistoric occupation has been destroyed by later agricultural practices (Jones 2002). The second recorded site (14CS113) is a

multiple component historic site located about 164 yards (150 meters) east of the parcel. It contains several late 19th and 20th century features: an exposure of quarried limestone; a segment of an abandoned railroad spur; the remains of a demolished structure; a line of concrete feed bunks; and the remains of cattle pens, corrals, and loading ramps associated with the railroad spur. (This is the same historic corral area discussed in the foregoing historic structures and cultural landscapes section.)

CULTURAL LANDSCAPES

Tallgrass Prairie National Preserve was listed as a national historic landmark in 1997 for its association with the cattleman's empire of the late 19th century and the transition from open range to the enclosed holdings of the large cattle companies in the 1880s. The period of national significance extends from 1878 through 1904. Eight buildings, two sites, and four structures have been identified as contributing to the property's national significance (NPS 2000a). In 2002, approximately 32 acres, including the historic Spring Hill / Z Bar Ranch Headquarters complex and school, were donated to the National Park Service by the National Park Trust.

The National Park Service initiated a cultural landscape inventory of the preserve in 1998. According to the NPS *Cultural Resources Management Guideline* (Director's Order – 28) a cultural landscape is

... a reflection of human adaptation and use of natural resources and is often expressed in the way the land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined by physical materials such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.

Thus, cultural landscapes are the result of the long interaction between people and the land—the influence of human beliefs and actions over time upon the natural landscape. Shaped through time by historical land-use and management practices, as well as politics and property laws, levels of technology, and economic conditions, a cultural landscape provides a living record of an area's past, a visual chronicle of its history. The dynamic nature of modern human life, however, contributes to the continual reshaping of cultural landscapes, making them a good source of information about specific times and places, but at the same time rendering their long-term preservation a challenge.

A cultural landscape report has been prepared for the preserve. It was completed in 2004 and includes a history of the preserve and an analysis of its historical integrity and significance. The cultural landscape report identifies a number of character-defining features for the national historic landmark. Some of these are listed in table 5.

**TABLE 5. CHARACTER-DEFINING FEATURES OF THE TALLGRASS PRAIRIE
NATIONAL PRESERVE CULTURAL LANDSCAPE**

General	
<ul style="list-style-type: none"> The historic alignment of the railroad spur connecting the cattle yard to the Atchison, Topeka & Santa Fe Railroad 	<ul style="list-style-type: none"> Prairie views, both into and out of the preserve
Historic Spring Hill / Z Bar Ranch Headquarters	
<ul style="list-style-type: none"> Cluster arrangement at the ranch headquarters Barn Carriage house Privy Stone corral complex Nineteenth-century pond site Ranch fences Walnut, elm, and oak trees 	<ul style="list-style-type: none"> Nineteenth-century residence Shed / chicken house Spring house Ice house / cistern South corral Terrace system adjacent to residence Curvilinear cedar plantation west of residence Views to Fox Creek, Flint Hills, & Lower Fox Creek School
Lower Fox Creek School	
<ul style="list-style-type: none"> School house 	<ul style="list-style-type: none"> Remnant stone steps east of school
Deer Park Environs	
<ul style="list-style-type: none"> Stone poultry house Historic road alignments 	<ul style="list-style-type: none"> Arched stone bridge St. Anthony Cemetery
Former Stockyard Site and Rail Spur	
<ul style="list-style-type: none"> Stockyard archeological site 	<ul style="list-style-type: none"> Historic road and rail alignments

The cultural landscape of the preserve has been evaluated based on the draft NRHP nomination and cultural landscape report research and analysis as significant nationally and locally under National Historic Preservation Act criterion A through D. The preserve landscape is nationally significant under criterion A for its relationship to the “broad patterns” of history, and more specifically in the area of agriculture. Not only is it nationally significant, but also locally significant under criterion B for its association with Stephen Jones and Barney Lantry. Both men were regionally important businessmen who facilitated in the transformation of the economy of Chase County, Kansas.

The architecture of the historic Spring Hill / Z Bar Ranch Headquarters is nationally significant under criterion C. Many other cultural concentrations located throughout the preserve contain examples of distinctive architectural characteristics and landscape features that may be locally significant as well.

The preserve is designated a national historic landmark and is locally significant under criterion D for the ability of its archeological resources to yield important information for the national historic landmark period of significance among other historic periods and including prehistoric periods.

The character-defining patterns of spatial organization and views associated with the local period of significance, in addition to national historic landmark features are as follows:

- pastures:
 - West Branch Pasture
 - Gas House Pasture
 - Windmill Pasture
 - Red House Pasture
 - Crusher Hill Pasture
 - West Traps Pasture
 - Brome Pasture
 - East Traps Pasture
 - Two Section Pasture
- cow meadow
- former corral area
- all scenic views

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

According to the cultural landscape report, this parcel is located in the West Traps Pasture. This pasture contributes to the cultural landscape in its historic use of a cultivated area for hay, as a pasture for grazing livestock, and as the visual expanse of the prairie landscape (Bahr Vermeer Haecker Architects 2004).

Proposed Maintenance Parcel and Visitor Information and Orientation Area

According to the cultural landscape report, this parcel is located in the south and southeast sections of the Brome hayfield. This hayfield contributes to the cultural landscape in its historic use of a cultivated area for hay, as a pasture for grazing livestock, and as the visual expanse of the prairie landscape. Features that are currently present on, within, or near the parcel include a pole barn and stone fence. These cultural features are associated with possible former habitation sites and associations with ranching and fencing of hayfields (Bahr Vermeer Haecker Architects 2004).

Proposed Flint Hills Ranching Legacy Area Revision

According to the cultural landscape report, this parcel is located in the southern portion of the Brome hayfield. As mentioned in the “Historic Structures” section of this document, this parcel is associated with the corral area and historically (1907–1970) served as a local hub for

shipping cattle in and out of the region. Cultural landscape features include fencing; remnant spur grades; stockyard pens, corrals, and associated features; roads and road traces; quarry sites; and landscape features (Bahr Vermeer Haecker Architects 2002).

SOILS

Soils within the preserve tend to be excessively drained with rapid runoff on slopes that range from 30% to 50% (NPS 2000a). The soils on slopes and uplands within the preserve are typically shallow and rocky. Soils formed on alluvial deposits within the Fox Creek valley are deeper and more permeable.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

The upland soil type within the parcel is Martin silty clay loam (USDA 2006). Martin silty clay loam formed on gentle slopes (2%–6%) (USDA 1974). It typically occurs on foot slopes below limestone outcrops. Available water capacity is high; water infiltrates rapidly and stored water is readily available to plants. Construction properties of this soil are considered poor for building foundations due to high shrink-swell potential and low shear strength (USDA 1974).

Proposed Maintenance Parcel and Visitor Information and Orientation Area

The upland soil types within this parcel are primarily Martin silty clay loam (approximately 4 acres) and Reading silt loam (approximately 2 acres). Martin silty clay loam occupies gentle slopes (2%–6%) (USDA 1974). It typically occurs on foot slopes below limestone outcrops. Available water capacity is high; water infiltrates rapidly and stored water is readily available to plants. Construction characteristics of this soil are considered poor for building foundations due to high shrink-swell potential and low shear strength (USDA 1974).

Reading silt loam occurs on broad, low terraces with a slope gradient of less than 1%, which slows runoff. Available water capacity is high; water infiltrates rapidly and stored water is readily available to plants. Construction characteristics for building foundations include medium to high shrink-swell potential (USDA 1974).

Proposed Flint Hills Ranching Legacy Area Revision

The upland soil type classified within this parcel is the Clime-Sogn complex with 3% to 20% slopes (USDA 1974). These soils are described as gently sloping to steep, moderately deep soils that overlay a subsoil of silty clay and shallow silty clay loams. The Clime-Sogn complex soils formed on broad areas on uplands of the region.

Clime soils are characterized by a silty clay surface layer underlain by very firm, calcareous, silty clay. Shale occurs at a depth of about 33 inches. Sogn soils are shallower to bedrock and

are coarser textured than Clime soils. Sogn soils are characterized by a silty clay loam surface layer about 6-inches thick. Subsurface layers consist of platy, massive limestone with few cracks or crevices. Available water capacity is low to moderate in Clime soils and low in Sogn soils. Runoff is rapid and erosion is a concern where vegetation cover is thin. There are no adverse features for low building foundations (USDA 1974).

PRIME AND UNIQUE FARMLANDS

In 1980, the Council on Environmental Quality directed federal agencies to assess the effects of their actions on farmland soils classified as prime or unique by the United States Department of Agriculture, Natural Resources Conservation Service (USDA, NRCS).

Prime farmland is defined by the USDA as:

... land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. Further, it could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0-6 percent.

Unique farmland is defined as:

... land other than prime farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree-grown nuts, olives, cranberries, fruit, and vegetables.

The State of Kansas has further identified farmland of statewide importance and defined it as:

... farmland, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, fiber, forage, and oilseed crops. Generally, additional farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable.

Additional farmlands of statewide importance may include tracts of land that have been designated for agriculture by state law.

Many of the soils common within Tallgrass Prairie National Preserve fit the criteria for prime farmlands and farmlands of statewide importance. Two soils so designated may be disturbed by the proposed construction of the visitor center, administrative, and maintenance facilities. Those that may be affected and that are considered prime farmland are Martin silty clay loam, 3% to 7% slopes, and Reading silt loam, rarely flooded. Those that may be affected and are considered farmland of statewide importance are the Clime-Sogn complex, 3% to 20% slopes. No areas or soils are considered unique farmlands within the preserve.

Soils form through the physical and chemical weathering of parent material. Physical soil properties are thus determined from the mineral composition of the parent material, climate under which the soil material has accumulated, biota associated with the soil environment, the corresponding topography, and the age or stage of development of the soil. Qualitative soil descriptions and specific quantitative data describing the physical properties of the aforementioned soils are provided in the soils section.

VEGETATION

The Tallgrass Prairie National Preserve occurs within the Prairie Parkland (Temperate) Province of Bailey (1995) and supports plant communities that comprise the Southeastern Great Plains Tallgrass Prairie Ecological System of NatureServe (2006). This ecological system encompasses the Flint Hills region of Kansas and its component native plant associations classified to date (NatureServe 2006) include:

- *Andropogon gerardii* – *Panicum virgatum* – *Helianthus grosseserratus* [Big Bluestem – Switchgrass – Sawtooth Sunflower] Herbaceous Vegetation
- *Andropogon gerardii* – *Sorghastrum nutans* – *Schizachyrium scoparium* [Big Bluestem – Yellow Indiangrass – Little Bluestem] Flint Hills Herbaceous Vegetation
- *Andropogon gerardii* – *Sorghastrum nutans* [Big Bluestem – Yellow Indiangrass] Unglaciaded Herbaceous Vegetation
- *Andropogon gerardii* – *Schizachyrium scoparium* [Big Bluestem – Little Bluestem] Northern Plains Herbaceous Vegetation
- *Bouteloua curtipendula* – *Bouteloua (eriopoda, gracilis)* [Sideoats Grama (Black Grama, Blue Grama) Herbaceous Vegetation
- *Juncus (acuminatus, brachycarpus)* – *Panicum virgatum* – *Bidens aristosa* – *Hibiscus moscheutos* ssp. *lasiocarpus* [Sharp-fruit Rush, Short-fruit Rush – Switchgrass – Tickseed Beggar-ticks – Swamp Rosemallow] Herbaceous Vegetation
- *Juniperus ashei* / *Bouteloua (curtipendula, hirsuta)* [Ashe Juniper / (Sideoats Grama, Hairy Grama)] Woodland

- *Muhlenbergia reverchonii* – *Croton monanthogynus* [Seep Muhly – Prairie-tea] Herbaceous Vegetation
- *Quercus macrocarpa* / *Andropogon gerardii* – *Panicum virgatum* [Bur Oak / Big Bluestem – Switchgrass] Woodland
- *Schizachyrium scoparium* – *Aristida dichotoma* – *Croton wildenowii* [Little Bluestem – Shinner's Three-awn Grass – Elliptical Rushfoil] / Lichens Wooded Herbaceous Vegetation
- *Schizachyrium scoparium* – *Bothriochloa laguroides* ssp. *torreyana* – *Croton wildenowii* [Little Bluestem – Silver Beardgrass – Elliptical Rushfoil] Herbaceous Vegetation
- *Schizachyrium scoparium* – *Bouteloua curtipendula* – *Rudbeckia missouriensis* – *Mentzelia oligosperma* [Little Bluestem – Sideoats Grama – Missouri Coneflower – Few-Flower Stickleaf] Wooded Herbaceous Vegetation
- *Schizachyrium scoparium* – *Dichanthelium* spp. – *Buchnera americana* – *Echinacea pallida* [Little Bluestem – Witchgrass spp. – Bluehearts – Pale Purple Coneflower] Herbaceous Vegetation
- *Schizachyrium scoparium* – *Sorghastrum nutans* – *Andropogon ternarius* – *Coreopsis grandiflora* [Little Bluestem – Yellow Indiangrass – Silver Bluestem – Large-flowered Tickseed] Sandstone – Shale Herbaceous Vegetation
- *Schizachyrium scoparium* – *Sorghastrum nutans* – *Danthonia spicata* – *Silene regia* [Little Bluestem – Yellow Indiangrass – Poverty Oatgrass – Royal Catchfly] Chert Herbaceous Vegetation
- *Schizachyrium scoparium* – *Sorghastrum nutans* – *Tradescantia bracteata* [Little Bluestem – Yellow Indiangrass – Long-bract Spiderwort] Alkaline Bedrock Herbaceous Vegetation

The Flint Hills contain one of the largest relatively intact areas of native tallgrass prairie in the United States. The prairie remains intact here because rocky substrate is present close to the surface of the rolling topography, making it unsuitable for small-grain agriculture centered on plowing and tilling the landscape (NatureServe 2006). This tallgrass prairie community is often dense, includes a moderate-to-high density of forb species, and usually supports less than 10% cover of shrub and tree species (NatureServe 2006). More than 450 species of vascular plants have been identified within the Tallgrass Prairie National Preserve habitats (NPS 2004b). Fire and grazing constitute the major dynamic processes of the tallgrass prairie ecological system (NatureServe 2006).

Tallgrass prairie in general represents an ecosystem that was once widespread, covering more than 140 million acres of the east-central United States and adjacent southern Canada. Within North America, approximately 96% of all tallgrass prairie has been replaced by agriculture, urban development, and infrastructure within the short timeframe of approximately 150 years (Samson and Knopf 1994). Tallgrass prairie loss to human land uses within Kansas was estimated to be approximately 82.6%, but the loss may be as high as 99.9% in the states of Illinois, Indiana, Iowa, North Dakota, Wisconsin, and the Canadian province of Manitoba (Samson and Knopf 1994). This estimate of tallgrass prairie loss exceeds similar estimates prepared for other major ecosystems in North America.

The common native vegetation type within the preserve is tallgrass prairie classified under the *Andropogon gerardii* – (*Sorghastrum nutans*) [Big Bluestem – (Yellow Indiangrass)] Herbaceous Alliance (NatureServe 2006), which is comprised largely of the tall and mid-bunchgrasses big bluestem (*Andropogon gerardii*), yellow Indiangrass (*Sorghastrum nutans*), and little bluestem (*Schizachyrium scoparium*) (figure 7). In the Flint Hills, the common grass species are often associated with co-dominant grasses such as sideoats grama (*Bouteloua curtipendula*), switchgrass (*Panicum virgatum*), and sand dropseeds (*Sporobolus* spp.), in addition to forbs including white heath aster (*Symphyotrichum ericoides*), sawtooth sunflower (*Helianthus grosseserratus*), roundhead bush clover (*Lespedeza capitata*), goldenrods (*Solidago* spp.), and prairie violet (*Viola pedatifida*) (NatureServe 2006).



FIGURE 7. REPRESENTATIVE TALLGRASS PRAIRIE COMMUNITY OF THE PRESERVE

Two proposed parcels totaling approximately 13.0 acres would be used to support preserve visitor and maintenance facilities and infrastructure. This section describes the existing vegetation of each proposed parcel within the regional context of native tallgrass prairies, riparian communities, and lands developed over the past 150 years for agriculture, cities, farmsteads, and infrastructure.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

This approximately 7.0-acre rectangular parcel consists primarily of grassland vegetation ranging from native tallgrass prairie to nonnative smooth brome (*Bromus inermis*). This parcel includes “go back” tallgrass prairie and areas of mixed native and nonnative prairie vegetation (figure 8). Trees occur as small stands and include nonnative Siberian elm (*Ulmus pumila*), and native American elm *Ulmus americana*), common hackberry (*Celtis occidentalis*), and eastern cottonwood (*Populus deltoides*). Saplings include elm (*Ulmus* spp.), Osage orange (*Maclura pomifera*), and eastern red cedar (*Juniperus virginiana*). Most of the area has been disturbed historically (CLR 2004) and is currently grazed by cattle. The area has not been cultivated for many years and is regionally described as “go back” prairie (figure 9).



FIGURE 8. PHOTOGRAPH OF FOX CREEK TRIBUTARY WOODLANDS

To the south of the parcel is a tributary drainage, which supports a few eastern cottonwood trees of moderate age. The understory consists of mesic native grasses such as prairie cordgrass (*Spartina pectinata*) and native forbs. The north end of the parcel supports nonnative smooth brome (figure 10). The eastern boundary adjoins the right-of-way for SH 177. Vegetation of the highway right-of-way consists mostly of native species, as well as smooth brome and other introduced species, and is maintained by mowing and limited herbicide applications (figure 11).



FIGURE 9. REPRESENTATIVE VEGETATION DESCRIBED AS “GO BACK” PRAIRIE



FIGURE 10. PHOTOGRAPH OF SMOOTH BROME PASTURE (SITE OF 1930S RANCH STRUCTURES)



FIGURE 11. PHOTOGRAPH OF HIGHWAY RIGHT-OF-WAY VEGETATION

Proposed Maintenance Parcel and Visitor Information and Orientation Area

This approximately 6.0-acre parcel is highly disturbed. Most of the area is currently used for hay production. The vegetation consists mostly of perennial smooth brome. The western perimeter of this parcel adjoins lands disturbed by three sewage lagoons constructed by Strong City (figure 12). The northern section consists of more smooth brome hay meadow. The southern edge abuts a county gravel road with smooth brome as the common perennial grass cover in the right-of-way (figure 13). The eastern edge of the parcel is bordered by a wooded hillside that supports black walnut (*Juglans nigra*), bur oak (*Quercus macrocarpa*), common hackberry, green ash (*Fraxinus pennsylvanica*), and honey locust (*Gleditsia triacanthos*).

Proposed Flint Hills Ranching Legacy Area Revision

The upland vegetation on this parcel is tallgrass prairie that has been grazed by cattle, but not plowed. On a scale of 1 to 10, with 10 being the best possible example of virgin tallgrass prairie, the vegetation on this parcel was ranked a 6 or 7 by a prairie vegetation expert from the USFWS (NPS 2003c).



FIGURE 12. PARCEL OF DISTURBED LAND ADJOINING STRONG CITY SEWAGE LAGOONS



FIGURE 13. GRAVEL COUNTY ROAD WITH SMOOTH BROME IN RIGHT-OF-WAY

In the area of the Bottomland Trail is Fox Creek with associated terraces and floodplain habitats. Part of this area was previously planted with smooth brome, but is now being restored through introduction of native prairie species. The Fox Creek corridor supports a floodplain forest (ash-elm-hackberry-burr oak-black walnut community).

THREATENED AND ENDANGERED SPECIES

The USFWS was originally contacted by a letter of request dated June 27, 1997, to provide a list of threatened and endangered species that may occur within Tallgrass Prairie National Preserve. This list was to be used for populating the threatened and endangered species section of the 2000 GMP (September 2000). The USFWS responded with a letter dated July 11, 1997, identifying the Topeka shiner, which was a candidate for listing. The Topeka shiner was listed as endangered in December 1998 (NatureServe 2006).

The National Park Service prepared a biological assessment in conjunction with the aforementioned 2000 GMP (March 28, 2000). In that document, potential effects to the Topeka shiner and the bald eagle (*Haliaeetus leucocephalus*) were evaluated. The USFWS, in a letter dated April 5, 2000, concurred with the biological assessment determination of “no adverse effect” on the threatened bald eagle. The USFWS also concurred with the biological assessment to initiate future section 7 consultation for any activities that would potentially affect the Topeka shiner.

The USFWS was contacted by letter on March 15, 2006, regarding the intent of the National Park Service to prepare a site development plan and GMP revision for future facilities at Tallgrass Prairie National Preserve. The facilities would include a visitor information and orientation center near a small intermittent tributary stream to Fox Creek. This stream is documented as occupied habitat for the Topeka shiner. The USFWS responded by letter dated April 12, 2006, stating that direct impacts were not likely based on the current siting plan. However, they advised that the GMP revision process should evaluate whether indirect impacts from surface runoff and riparian corridor maintenance could impact the Topeka shiner or its habitat.

The USFWS Region 6 Mountain-Prairie Web site was also consulted for a list of threatened and endangered species currently listed within Chase County, Kansas (USFWS 2006). The list included the Topeka shiner, the Neosho madtom (*Noturus placidus*), and the bald eagle. Brief descriptions of these species and their ecology follows.

The Topeka shiner was formerly widespread in western tributaries of the Mississippi River from central Missouri to southern Minnesota, and west to southeastern South Dakota and western Kansas (Phillips et al. 1982). Topeka shiners have been extirpated in many localities; however, they are documented in six midwestern states including small areas in Kansas, Missouri, Iowa, Nebraska, South Dakota, and Minnesota. Most of the remaining populations are in Kansas (Cross and Collins 1995). Topeka shiners formerly inhabited all major drainages in Kansas, but are now restricted to primary Flint Hills headwater streams in the Neosho and Kansas River drainages (Kerns 1982, Tabor 1993, Minckley and Cross 1959, Cross 1967,

Schwilling 1981). They are locally common in some of these streams and are considered stable at many sites in the Cottonwood River and Mill Creek drainages.

The Topeka shiner is a 2- to 3-inch-long fish that typically inhabits quiet, open, permanent pools of small, clear, high-quality headwaters and creeks. These features drain upland prairie areas, including tiny spring-fed pools in headwater streams and larger streams (NatureServe 2006).

In Kansas streams, the Topeka shiner (figure 14) occupies the lower half of the water column (Kerns, unpublished data), although Tabor (1993) stated it occurs in mid-water and surface areas. A wide range of water temperatures is tolerated. Oxygen levels are generally near saturation. The water may range from clear to murky (from plankton blooms or suspended fine clay particles when the water is very warm). Occupied streams do not have a strong continuous flow; the flow is usually less than 5-cubic feet per second (Minckley and Cross 1959). The Topeka shiner is reported to breed in Kansas streams from late June through August (Cross 1967), and become sexually mature during their second summer—their normal life span does not exceed three years.

The federally endangered Neosho madtom occurs in lower reaches of the Cottonwood River of which Fox Creek is a tributary. Neosho madtoms have not been found in the preserve.

The Neosho madtom is a small freshwater catfish. It occupies large, medium-gradient streams with moderate to strong currents; usually in clear water under rocks in riffles with small, loosely packed gravel-pebble. Neosho madtoms occasionally are found in pools adjacent to riffles or near tree trunks in slack water downstream from riffles (Wenke et al. 1992).



FIGURE 14. TOPEKA SHINER

Loosely compacted gravel bars are important components of the habitat (Bulger and Edds 2001). Neosho madtoms feed on larval insects occurring in streambed crevices (Cross and Collins 1995). The range of the Neosho madtom includes the main stem of the Neosho River and its tributary streams (Cottonwood and Spring rivers) in eastern Kansas. It may also be found in eastern Oklahoma and southwestern Missouri; formerly occurring in the Grand (Neosho) and Illinois rivers in Oklahoma.

The federally threatened bald eagle ranges over large areas and is an occasional transient species in the Tallgrass Prairie National Preserve. There are no known nesting sites in the vicinity. The bald eagle is a large diurnal raptor that primarily feeds on fish, although it also forages on small mammals, carrion, birds, turtles, and snakes. Bald eagles are opportunistic and will steal food from other raptors, including other bald eagles (Ehrlich et al. 1988). Breeding habitat most commonly includes areas close to (within 2.5 miles) coastal areas, bays, rivers, lakes, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, and seabirds (Andrew and Mosher 1982, Campbell et al. 1990). The bald eagle preferentially roosts in conifers, large deciduous trees, or other sheltered sites in winter; it typically selects the larger, more accessible trees (Buehler et al. 1991, 1992). The current range of the bald eagle includes all of the United States and much of Canada and is common in areas with extensive aquatic habitat.

The Kansas Natural Heritage Inventory monitors approximately 130 vertebrate and invertebrate species and approximately 400 plant species. Of the plant species known for the preserve, none are listed as Kansas threatened, endangered, or species in need of conservation (NPS 2000a).

Two plant species listed as federally threatened, e.g., western prairie fringed orchid (*Platanthera praeclara*) and Mead's milkweed (*Asclepias meadii*) occur in Kansas, but have not been observed within the preserve. Chase County is not within the known distribution of the western prairie fringed orchid or Mead's milkweed.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

The federally endangered Topeka shiner has been confirmed to occur in two unnamed tributaries of Fox Creek and one unnamed tributary of the Cottonwood River, located on the west side of the preserve, including the intermittent tributary near this parcel.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

No impacts to threatened, endangered, or candidate species or species of special concern are anticipated in this area.

Proposed Flint Hills Ranching Legacy Area Revision

No impacts to threatened, endangered, or candidate species or species of special concern are anticipated in this area.

WILDLIFE

Approximately 40 mammal species occur within preserve habitats. Larger mammals include white-tailed deer (*Odocoileus virginianus*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), red fox

(*Vulpes vulpes*), beaver (*Castor canadensis*), and American badger (*Taxidea taxus*). Small mammals include the opossum (*Didelphis virginiana*), eastern cottontail (*Sylvilagus floridanus*), and woodchuck (*Marmota monax*), in addition to weasel, squirrel, pocket gopher, bat, mole, vole, shrew, and mice.

Up to 145 bird species use the habitats in and around Tallgrass Prairie National Preserve (NPS 2004c). Many birds are transient or are migratory residents. Some of the more notable species include the greater prairie chicken (*Tympanuchus cupido*) (figure 15), wild turkey (*Meleagris gallopavo*), great horned owl (*Bubo virginianus*), Henslow's sparrow (*Ammodramus henslowii*), and sandhill crane (*Grus canadensis*). There are also numerous waterfowl, sparrow, flycatcher, raptor, woodpecker, wren, and warbler species, among others.

A recently completed herpetofaunal inventory found 8 amphibian and 23 reptile species on the preserve. The amphibians include species of frogs, toads, and salamanders. The reptiles include many species of snakes, lizards, skinks, and turtles.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

Many of the species previously discussed occur within the habitats of this parcel, either permanently, or during migration, or during foraging activities.



FIGURE 15. GREATER PRAIRIE CHICKEN

Proposed Maintenance Parcel and Visitor Information and Orientation Area

Many of the species previously discussed occur within the habitats of this parcel, either permanently, during migration, or during foraging activities.

Proposed Flint Hills Ranching Legacy Area Revision

Many of the species previously discussed occur within the habitats of this parcel, either permanently, during migration, or during foraging activities.

VISITOR EXPERIENCE AND APPRECIATION

Tallgrass Prairie National Preserve is open year-round. Visitation tends to be highest during the months of May, June, and October. The preserve currently averages between 18,000 and

19,000 visitors per year. Visitation is expected to increase once a visitor center for the preserve opens, providing enhanced regional visibility. Estimates of how much visitation might increase vary. The NPS Office of Construction and Program Management assumed that visitation would increase to 25,000 persons per year when projecting facility space needs for this study. However, a study conducted in 1999 projected that visitation could reach as high as 100,000 to 125,000 persons per year (BRW 1999). Typically, visitors tend to stay at the preserve an average of 1.5 hours, although length of stay could increase once the visitor center opens and additional visitor opportunities become available.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

One of the main visitor opportunities currently available at the preserve is the daily tours of the ranch house and environs. During periods of high visitation, the ranch house tends to be crowded and noisy due to the mix of functions and uses of the structure. This situation affects visitor experience and hinders the services that National Park Service, The Nature Conservancy, and Kansas Park Trust staff are able to provide. Similarly, the presence of buses, equipment, and NPS vehicles stored in ranch outbuildings detracts from the historic ambiance of the ranch complex.

In addition to ranch house and ranch headquarters tours, the preserve offers prairie bus tours (offered three times daily from May to October), living history programs at the ranch on weekends during summer months, visits to the one-room school house (open weekend afternoons in May, June, September, and October), and hiking along preserve trails.

There are four trails originating from the historic Spring Hill / Z Bar Ranch Headquarters. The Southwind Nature Trail winds its way from the ranch house, through the prairie to the Lower Fox Creek school house (located about 0.5 mile to the north) and back. The Scenic Overlook Trail heads west from the ranch headquarters for approximately 6.5 miles into the heart of the prairie. The Three Pasture Loop Trail is approximately 3.8 miles long, heads west from the historic Spring Hill / Z Bar Ranch Headquarters, turns south, and then circles back to the point of origin. The Red House Trail (approximately 6.0 miles) follows the Three Pasture Loop Trail and includes an additional loop at the southwest preserve boundary.

Several preserve facilities or visitor opportunities are partially accessible to those using wheelchairs. The main floor of the ranch house and barn, where visitor services are currently provided, are wheelchair accessible via the use of removable ramps. Wheelchair accessible parking is available north of the barn. The prairie tours use a bus equipped to accommodate wheelchairs, and the Bottomland Trail is wheelchair accessible. The current administrative offices in Cottonwood Falls are also wheelchair accessible.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

This area would not be open to visitor use; however, it is adjacent to the day use area. The GMP revision anticipates that there will eventually be dispersed day use opportunities such as hiking, horseback riding, and fishing in certain areas east of the Fox Creek bottomlands.

Proposed Flint Hills Ranching Legacy Area Revision

The Bottomland Trail traverses land being restored to bottomland (riparian) prairie near Fox Creek, and interprets both natural and cultural history. The trailhead for the Bottomland Trail is located on the north side of CR 227, with a small parking area on the side of the county road.

SCENIC QUALITY

Scenic quality (integrity of scenic vistas) has been identified as one of the preserve's most important resources (NPS 2000a). The 2000 GMP identifies several vistas as noteworthy because they are representative of the larger, nearly undeveloped and sparsely populated Flint Hills landscape. Part I of the cultural landscape report for the preserve (NPS 2000b) identifies these same key views. Certain vistas are relevant to discussions of potential impacts on scenic quality.

Traveling north on SH 177 from U.S. 50, the preserve flanks the highway on both sides revealing a rural, hilly, minimally developed landscape. The only readily apparent human-constructed feature north of St. Anthony Cemetery is the historic Spring Hill / Z Bar Ranch Headquarters, school house, and fences.

Similarly, from the ranch complex (or from the north/south ridge in the center of the preserve) looking south, there are few human intrusions on the Flint Hills landscape. Depending on the season, a rolling sea of green or brown expands nearly to the horizon. In the distance, near the horizon, one can make out a few human-made features: St. Anthony Cemetery, a gas compressor station, a large elevated tank, and a grain silo on the mesa-like plateau west of SH 177.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

This parcel is visible along SH 177 within 0.5 mile of the site. This parcel is also visible from the bottomland area and the bluffs to the east, and elevated prairie to the west. This location is not visible from the west or east beyond 1.0 mile or from the north and south beyond 0.5. Views from this parcel are as follows:

- toward the north: historic Spring Hill / Z Bar Ranch Headquarters
- toward the east: SH 177 and bottomland prairie in the foreground, bottomland forest in the middle ground, and bluff and prairie in the background
- toward the west: tallgrass prairie
- toward the south: tallgrass prairie; SH 177, St. Anthony Cemetery, and grain silo

Proposed Maintenance Parcel and Visitor Information and Orientation Area

Views to this parcel from vantage points within the preserve are well screened by trees and bluffs. Views from this parcel are as follows:

- toward the north: short views of the terrace slope, bluffs, and woods
- toward the east: short views of woods and rural residential development
- toward the west: Strong City sewage lagoons; Fox Creek and bottomland forest in the middle- and foreground; east-facing slope with outbuildings, corrals, and silo in the background
- toward the south: Strong City, CR 227, and U.S. 50 and highway traffic in the background

Proposed Flint Hills Ranching Legacy Area Revision

This parcel is over 2.0 miles from the historic Spring Hill / Z Bar Ranch Headquarters, and in its undeveloped state it is difficult to identify from the distant ranch. Much of the site is hidden by intervening topography. This parcel is in an area where other human-caused features (e.g., St. Anthony Cemetery, the grain silo, and U.S. 50) are barely visible near the horizon. The presence of these features would help new facilities blend into the surrounding landscape. This parcel is fairly visible from Bottomland Trail. Views from this parcel are as follows:

- toward the north: St. Anthony Cemetery in the foreground, tallgrass prairie in the middle ground, tallgrass prairie and historic Spring Hill / Z Bar Ranch Headquarters in the background
- toward the east: bottomland prairie (and Bottomland Trail) in the foreground, bottomland forest in the middle and background
- toward the west: KDOT highway materials site in the foreground; SH 177 in the middle ground; east-facing slope with outbuildings, corrals, and silo in the background
- toward the south: KDOT highway materials site in the fore and middle ground, and U.S. 50 and highway traffic in the background

WATER QUALITY

The principal aquatic resources within the preserve are Palmer Creek and Fox Creek. Palmer Creek is a tributary to Fox Creek and flows west to east in the northern portion of the preserve. Fox Creek, which bisects the preserve and flows north to south, is a major tributary

to the Cottonwood River. There are additional unnamed tributaries that discharge into Fox Creek. The floodplains associated with Palmer and Fox creeks have been delineated and digitized from the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (NPS 2000a).

Three assessments have been conducted on aquatic resources within the preserve. A monitoring program was initiated by the Kansas Department of Health and Environment sampling Fox and Palmer creeks beginning in 1998. Sample analysis determined a high fecal coliform count in Palmer and Fox creeks, a possible result of nonpoint source runoff from heavily grazed pastures. Prior to 1998, a water quality test on stream health for Fox Creek rated the water quality as “poor” due to an increase in species tolerant to pollution and a decrease in intolerant species (NPS 2000a). A recent evaluation of three drainage segments of Palmer Creek concluded that a western segment of Palmer Creek was functioning, an eastern segment of Palmer Creek was nonfunctioning, and an unnamed tributary to Fox Creek was functional-at-risk due to incising at its lower end. Other condition assessments for this area were rated as notable for their excellence and additional information regarding these assessments can be found in the 2000 GMP.

The Kansas Department of Health and Environment is authorized to implement the U.S. Environmental Protection Agency NPDES stormwater program. This program requires that proponents of any construction activity that disturbs more than 1.0 acre of land must file a NPDES permit application for stormwater runoff. The proponent must obtain authorization from the Kansas State Department of Health and Environment to discharge stormwater runoff associated with construction activities prior to commencing construction; therefore, a NPDES permit application would be filed and approved prior to construction.

The NPDES permit process also requires preparation of a stormwater pollution prevention plan. This plan would provide guidance for prevention, minimization, and mitigation of soil erosion and water pollution during construction activities. In the case of the proposed NPS facilities, the construction contractor would be responsible for developing a NPS-approved plan. The plan would be available for public and agency inspection at the construction site. The NPDES permit and the stormwater pollution prevention plan measures would help minimize potential adverse impacts to water resources resulting from construction activities.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

Potential water quality effects to Fox Creek via the intermittent tributary during construction include sedimentation, spills of fuel or lubricants from construction equipment, and increased runoff from impervious surfaces.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

This parcel is located approximately 0.3 mile east of Fox Creek, less than 0.5 mile north of an unnamed tributary and due east of the sewage lagoons. Water quality effects to Fox Creek due to proposed construction at this site are not expected.

Proposed Flint Hills Ranching Legacy Area Revision

The major aquatic resource near the alternative sites proposed for constructing new facilities is Fox Creek. Water quality concerns of the proposed action relate to the potential impact of construction activities on the water quality of Fox Creek.

FLOODPLAINS

Executive Order 11988 (*Floodplain Management*) requires federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. National Park Service Director's Order – 77-2: *Floodplain Management* (NPS 2003a) provides additional guidance for implementing Executive Order 11988:

Class I includes the location or construction of administrative, residential, warehouse and maintenance buildings . . . which by their nature entice or require individuals to occupy the site, are prone to flood damage, or result in impacts to natural floodplain values. Actions in this class are subject to the floodplain policies and procedures if they lie within the 100-year regulatory floodplain. Class II actions include 'critical actions'—those activities for which even a slight chance of flooding would be too great. Examples of critical actions include schools, hospitals, fuel storage facilities, irreplaceable records, museums, and storage of archeological artifacts. Actions in this class are subject to the floodplain policies and procedures if they lie within the 500-year regulatory floodplain.

Furthermore,

If a proposed action is found to be in an applicable regulatory floodplain and relocating the action to a nonfloodplain site is considered not to be a viable alternative, then flood conditions and associated hazards must be quantified as a basis for management decision making and a formal Statement of Findings must be prepared.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

Class I functions would be located outside the 100-year floodplain; therefore, no statement of findings for class I actions would be required or would be prepared.

Once a preferred site for the new facilities is approved, and before planning and design of the new facilities proceeds, a qualified hydrologist would conduct a site visit to delineate the 100-year floodplain. This would ensure that facilities are placed and protected according to NPS floodplain guidelines during the design phase.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

A portion of the parcel proposed for the maintenance facility is located within the 100-year floodplain of Fox Creek (FEMA Flood Insurance Rate Map 200040-0005B, 1990). The construction of the sewage lagoon may have altered the floodplain. All proposed facilities (class I actions) would be located outside the 100-year floodplain. Hazardous materials storage areas and storage/display of curatorial items are class II actions and must be outside of or protected from the 500-year floodplain. The 500-year floodplain is not shown on the previously cited FEMA map. The 100-year and 500-year floodplains would be delineated by a qualified hydrologist in the area for the maintenance facilities.

Because class I and class II functions (hazardous materials storage and storage/display of curatorial items) would be located outside the 100-year and 500-year floodplain, respectively, no statement of findings for class I or class II actions would be required or would be prepared.

Proposed Flint Hills Ranching Legacy Area Revision

The no-action alternative site is located outside the 100-year floodplains of Fox Creek and the Cottonwood River (FEMA Flood Insurance Rate Map No. 200040-0005B, 1990).

Hazardous materials storage areas and storage/display of curatorial items are class II actions and require location outside of or protection from the 500-year flood. The 500-year floodplain is not shown on the FEMA map; however, the topography of the site indicates that it is possible to locate all facilities above the 100-year floodplain and it should also be reasonable to locate these facilities outside of the 500-year floodplain (NPS, Smilie 2003c). Because class II functions (hazardous materials storage and storage/display of curatorial items) would be located outside the 500-year floodplain, no statement of findings for class II actions would be required or would be prepared.

Once a preferred site for the new facilities is approved, and before planning and design of the new facilities proceeds, a site visit by a qualified hydrologist would be conducted to delineate 100- and 500-year floodplains in order to ensure that construction of facilities takes place outside of floodplains.

PRESERVE NATIONAL PARK SERVICE OPERATIONS

Operations at Tallgrass Prairie National Preserve are currently split between Cottonwood Falls and the historic Spring Hill / Z Bar Ranch Headquarters, which is located about 5 miles to the north. Offices of the superintendent, administrative staff, and division chiefs (natural resources, facility maintenance, and administration) are located at Cottonwood Falls. The interpretive division chief and rangers, maintenance and natural resources management staff, and The Nature Conservancy staff work from the Cottonwood Falls office, and the Kansas Park Trust staff work out of the ranch headquarters complex.

ENVIRONMENTAL CONSEQUENCES

METHODOLOGY FOR ASSESSING IMPACTS

Potential impacts are described in terms of type (are the effects beneficial or adverse?), context (are the effects site specific, local, or even regional?), duration (are the effects short term, lasting less than one year, or long-term, lasting more than one year?), and intensity (are the effects negligible, minor, moderate, or major?). Because definitions of intensity vary by impact topic, intensity definitions are provided separately for each impact topic analyzed in this GMP revision.

IMPAIRMENT OF NATIONAL PARK RESOURCES

The National Park Service Organic Act of 1916 states that the National Park Service

... shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified . . . by such means and measures as conform to the fundamental purpose of the said parks, monuments and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (emphasis added).

In addition to avoiding impairment, NPS managers must seek ways to avoid, or minimize to the greatest degree practicable, adverse impacts on preserve resources and values. However, laws do give NPS managers discretion to allow certain impacts to preserve resources and values when necessary and appropriate to fulfill the purposes of a preserve, as long as the impact does not constitute impairment of the affected resources and values (NPS 2003c).

NPS Management Policies 2006 assign determinations of impairment to the responsible manager and only direct that an action should be considered to constitute impairment if, in the manager's professional judgment, the action "would harm the integrity of the resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values."

An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the preserve
- key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve

- identified as a specific goal in the preserve's GMP or other relevant NPS planning documents

Director's Order – 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making*, states that environmental documents will evaluate and describe impacts that may constitute an impairment of preserve resources or values. An assessment of impairment is made in the "Environmental Consequences" section of this document for historic structures, cultural landscapes, soils, vegetation, wildlife, threatened and endangered species, and scenic quality. By means of NPS *Interim Technical Guidance on Assessing Impacts and Impairment to Natural Resources* (NPS 2003c), these statements assess whether impairment is *likely to occur* or *not likely to occur* for each resource type (statements are not required for nonresource impact topics). In addition, a comprehensive concluding statement regarding whether impairment *will result* is made at the end, which considers all anticipated impacts.

Cumulative Impacts

The Council on Environmental Quality regulations, which implement NEPA, require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions." Cumulative impacts are considered for both the no-action and preferred alternatives.

Cumulative impacts were determined by combining the impacts of the alternatives with other past, present, and reasonably foreseeable future projects or actions in or around Tallgrass Prairie National Preserve. Past actions include historic land use and urban development around the preserve, and conversion of tallgrass prairie to agricultural land on an immense scale from an ecosystem perspective. Recently completed projects include installation of a new water supply line for the preserve and installation of the Bottomland Trail. Foreseeable future actions include a small expansion (roughly 1.5 acres) of St. Anthony Cemetery, which is located in the immediate area of the alternative sites for new facilities, highway construction and maintenance, trail construction and maintenance, watershed and stock pond development, stream alterations, de-watering, land management, and introduction of nonnative species.

Impacts to Cultural Resources / Section 106 of the National Historic Preservation Act

In this GMP revision, impacts to cultural resources are described in terms of type, context, duration, and intensity, which is consistent with the regulations of the Council on Environmental Quality that implement NEPA. These impact analyses are intended, however, to comply with the requirements of both NEPA and section 106 of the National Historic Preservation Act. In accordance with the Advisory Council on Historic Preservation's regulations implementing section 106 of the National Historic Preservation Act (36 CFR 800, *Protection of Historic Properties*), impacts to cultural resources were also identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources

present in the area of potential effects that are either listed in or eligible to be listed in the NRHP; (3) applying the criteria of adverse effect to affected NRHP-eligible or -listed cultural resources; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations, a determination of either *adverse effect* or *no adverse effect* must also be made for affected NRHP-listed or eligible cultural resources. An *adverse effect* occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the NRHP, e.g., diminishing the integrity (or the extent to which a resource retains its historic appearance) of its location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects of the alternatives that would occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5, *Assessment of Adverse Effects*). A determination of *no adverse effect* means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the NRHP.

Council on Environmental Quality regulations and National Park Service *Conservation Planning, Environmental Impact Analysis, and Decision-making* (Director's Order – 12) also call for a discussion of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g., from major to moderate. Any resultant reduction in the intensity of an impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. It does not suggest that the level of effect, as defined by section 106, is similarly reduced. Cultural resources are nonrenewable resources and adverse effects generally consume, diminish, or destroy the original historic materials or form, resulting in a loss in the integrity of the resource that can never be recovered. Therefore, although actions determined to have an adverse effect under section 106 may be mitigated, the effect remains adverse.

A section 106 summary is included in the applicable impact analysis sections. This summary is an assessment of the effect of the undertaking (implementation of the alternative) on NRHP-eligible or -listed cultural resources only, based on the criterion of effect and criteria of adverse effect found in Advisory Council regulations.

CRITERIA AND THRESHOLDS FOR IMPACT ANALYSIS

Impact analyses and conclusions are based on a review of existing literature and preserve studies, information provided by preserve staff, professional judgments and insights of other agencies and officials, and input from interested local tribes and the general public. Definitions are used to evaluate the context, duration, and intensity. Environmental consequences are evaluated based on the adoption of the mitigation measures outlined in the "Alternatives" section of this document, where applicable, laws, regulations, and/or guidance that relates to the evaluation of each impact topic are identified.

Context is the setting within which impacts are analyzed such as the affected region, society as a whole, the affected interests, and/or a locality. In this GMP revision, the intensity of impacts is evaluated within a local (i.e., project area) context, while the

intensity of the contribution of effects to cumulative impacts are evaluated in a regional context.

Duration is the time period for which the impacts are evident. Short-term impacts are those that are noticeable during the project and six months thereafter. Long-term impacts are those that are evident for periods longer than one year after the project has been completed.

For this analysis, *impact intensity* or severity is defined for each impact topic using a table format.

Historic Structures

The National Historic Preservation Act and NEPA require consideration of impacts on historic structures and buildings listed in or eligible for listing in the NRHP.

The historic Spring Hill / Z Bar Ranch Headquarters ranch house was listed in the NRHP in 1971. In order for a building to be listed in the NRHP, it must be associated with an important historic context and possess historic integrity of those features necessary to convey its significance, i.e., location, design, setting, workmanship, materials, feeling, and association. The entire preserve property was listed as a national historic landmark in 1997. Potential impacts were determined by considering to what degree historic integrity and character-defining features would be affected by the alternatives.

Impact Indicators, Criteria, and Methodology

For purposes of analyzing potential impacts of historic structures, the thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Intensity Definition
Negligible	Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for section 106 would be <i>no adverse effect</i> .
Minor	<p>Adverse Impact – alteration of a pattern(s) or feature(s) would not diminish the overall integrity of the resource. The determination of effect for section 106 would be <i>no adverse effect</i>.</p> <p>Beneficial Impact – stabilization/preservation of features and landscape patterns in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> and/or the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i>. The determination of effect for section 106 would be <i>no adverse effect</i>.</p>

Impact Intensity	Intensity Definition
Moderate	<p>Adverse Impact – alteration of a pattern(s) or feature(s) would diminish the overall integrity of the resource. The determination of effect for section 106 would be <i>adverse effect</i>. A memorandum of agreement is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation, in accordance with 36 CFR 800.6(b). Measures identified in the memorandum of agreement to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.</p> <p>Beneficial Impact – rehabilitation of a structure, landscape, or its patterns and features in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> and/or the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i>. The determination of effect for section 106 would be <i>no adverse effect</i>.</p>
Major	<p>Adverse Impact – alteration of a pattern(s) or feature(s) would diminish the overall integrity of the structure or landscape. The determination of effect for section 106 would be <i>adverse effect</i>. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the National Park Service and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).</p> <p>Beneficial Impact – restoration of a structure, landscape, or its patterns and features in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> and/or <i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i>. The determination of effect for section 106 would be <i>no adverse effect</i>.</p>

Archeology

The National Historic Preservation Act, NEPA, and NPS *Management Policies* 2006 require consideration of impacts on archeological resources listed in or eligible for listing in the NRHP.

The actual physical material of cultural resources can only answer certain important research questions about human history. Archeological resources have the potential to answer, in whole or in part, such research questions. An archeological site(s) can be eligible to be listed in the NRHP if the site(s) has yielded, or may be likely to yield, information important in prehistory or history. An archeological site(s) can be nominated to the NRHP in one of three levels of significance: local, state, or national.

For purposes of analyzing impacts to archeological resources, thresholds of change for the intensity of an impact are based on the potential of the site(s) to yield information important in prehistory or history, as well as the probable historic context of the affected site(s). Following are the impact threshold definitions for archeological resources:

Impact Intensity	Intensity Definition
Negligible	Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for section 106 would be <i>no adverse effect</i> .
Minor	<p>Adverse Impact – Disturbance of a site(s) results in little, if any, loss of integrity. The determination of effect for section 106 would be <i>no adverse effect</i>.</p> <p>Beneficial Impact – Maintenance and preservation of a site(s). The determination of effect for section 106 would be <i>no adverse effect</i>.</p>
Moderate	<p>Adverse Impact – Disturbance of a site(s) results in loss of integrity. The determination of effect for section 106 would be <i>adverse effect</i>. A memorandum of agreement is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the memorandum of agreement to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.</p> <p>Beneficial Impact – Stabilization of a site(s). The determination of effect for section 106 would be <i>no adverse effect</i>.</p>
Major	<p>Adverse Impact – Disturbance of a site(s) results in loss of integrity. The determination of effect for section 106 would be <i>adverse effect</i>. Measures to minimize or mitigate adverse impacts cannot be agreed on and the National Park Service and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).</p> <p>Beneficial Impact – Active intervention to preserve a site(s). The determination of effect for section 106 would be <i>no adverse effect</i>.</p>

Cultural Landscapes

The National Historic Preservation Act and NEPA require consideration of impacts on cultural landscapes listed in or eligible for listing in the NRHP.

As described by the National Park Service *Cultural Resource Management Guideline* (Director's Order – 28), a cultural landscape is

... a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.

Cultural landscapes within the preserve have been identified. The entire preserve property was listed as a national historic landmark in 1997. Potential impacts were determined by considering to what degree historic integrity and character-defining features would be affected by the alternatives. For purposes of analyzing potential impacts to cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Intensity Definition
Negligible	Impact is at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for section 106 would be <i>no adverse effect</i> .
Minor	<p>Adverse Impact – alteration of a pattern(s) or feature(s) would not diminish the overall integrity of the resource. The determination of effect for section 106 would be <i>no adverse effect</i>.</p> <p>Beneficial Impact – stabilization of features and landscape patterns in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> and/or <i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i>. The determination of effect for section 106 would be <i>no adverse effect</i>.</p>
Moderate	<p>Adverse Impact – alteration of a pattern(s) or feature(s) would diminish the overall integrity of the resource. The determination of effect for section 106 would be <i>adverse effect</i>. A memorandum of agreement is executed among the National Park Service and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation, in accordance with 36 CFR 800.6(b). Measures identified in the memorandum of agreement to minimize or mitigate adverse impacts reduce the intensity of impact under NEPA from major to moderate.</p> <p>Beneficial Impact – rehabilitation of a structure, landscape, or its patterns and features in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> and/or <i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i>. The determination of effect for section 106 would be <i>no adverse effect</i>.</p>
Major	<p>Adverse Impact – alteration of a pattern(s) or feature(s) would greatly diminish the overall integrity of the structure or landscape or remove overall integrity of the structure or landscape. The determination of effect for section 106 would be <i>adverse effect</i>. Measures to minimize or mitigate adverse impacts cannot be agreed upon and the National Park Service and applicable state or tribal historic preservation officer and/or Advisory Council are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b).</p> <p>Beneficial Impact – preservation or restoration of a structure, landscape, or its patterns and features in accordance with the <i>Secretary of the Interior's Standards for the Treatment of Historic Properties</i> and/or <i>Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i>. The determination of effect for section 106 would be <i>no adverse effect</i>.</p>

Soils

Analyses of potential impacts on soils were derived from available information regarding natural systems and soils in and near Tallgrass Prairie National Preserve, as well as preserve staff observations about the effects of visitor use and construction on soils to date. The thresholds of change for the intensity of impacts to soils are defined as follows:

Impact Intensity	Intensity Definition
Negligible	The impact to soil formation or erosion processes is at the lowest levels of detection based on standard scientific methodologies. Impacts are well within natural variability.
Minor	The impact to soil formation or erosion processes is detectable, but slight. Impacts are expected to remain within the range of natural variability, possibly showing small, short-term disruptions in soil formation or erosion processes that are within natural variability.
Moderate	The impact to soil formation or erosion processes is readily apparent. Impacts are expected to be outside the range of natural variability for short periods of time. Disruptions within the range of natural variability may be long term. Disruptions to key processes are expected to be short term and temporarily outside the range of natural variation.
Major	The impact to soil formation or erosion processes is substantial, or involves widespread loss. Impacts are expected to be outside the range of natural variation for short to long periods of time, or may even be permanent. Disruptions within the range of natural variation may be long term. Disruptions to key processes may be long term or permanent.

Prime and Unique Farmlands

The impact intensity thresholds for impacts to prime and unique farmlands and also applicable to farmlands of statewide importance are as follows:

Impact Intensity	Prime and Unique Farmlands Intensity Definition
Negligible	The impact to prime and unique farmlands is at the lowest levels of detection, not perceptible, and not measurable.
Minor	The impact to prime and unique farmlands would be noticeable, but would not alter the function of the farmland or the criteria for which it is considered prime or unique.
Moderate	The impact to prime and unique farmlands would be noticeable and may alter the function of the farmland or the criteria for which it is considered prime or unique.
Major	The impact to prime and unique farmlands would be readily apparent and would alter the function of the farmland or the criteria for which it is considered prime or unique.

Vegetation

Analyses of potential impacts on vegetation and the tallgrass prairie community were based on available information about floral communities and the extent to which these communities are affected by facility construction and construction-related activities. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Intensity Definition
Negligible	Impacts occur, but are minimal and have no observable effects on plant communities.
Minor	Impacts are detectable, but the severity and timing of changes are not expected to be outside the range of natural variability and not expected to have any long-term effects on plant communities.
Moderate	Impacts are detectable and the severity and timing of changes are expected to be outside the range of natural variability for short periods of time and changes within natural variability may be long term. Plant species are not at risk of being extirpated from the preserve.
Major	Impacts are detectable and the severity and timing of changes are expected to be outside the range of natural variability for short to long periods of time—or may even be permanent. Changes within the range of natural variability may be long term or permanent. In extreme cases, plant species may be extirpated from the preserve.

Threatened and Endangered Species

The Endangered Species Act of 1973 (16 USC 1531 *et seq.*), as amended, mandates that all federal agencies consider the potential effects of their actions on species listed as threatened or endangered. If the National Park Service determines that an action may adversely affect a federally listed species, consultation with the USFWS is required to ensure that the action would not jeopardize the species' continued existence or result in the destruction or adverse modification of critical habitat. *NPS Management Policies 2006* state that potential effects of agency actions would also be considered for state or locally listed species.

Known impacts caused by development and human use were also considered. The thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Intensity Definition
Negligible	No federally listed species would be affected or the alternative would affect an individual of a listed species or its critical habitat, but the change would be so small that it would not be of any measurable or perceptible consequence to the protected individual or its population. Negligible effect would equate with a "no effect" determination in USFWS terms.
Minor	The alternative would affect an individual(s) of a listed species or its critical habitat, but the change would be small. Minor effect would equate with a "may affect" determination in the USFWS terms and would be accompanied by a statement of "likely..." or "not likely to adversely affect" the species.
Moderate	An individual or population of a listed species or its critical habitat would be noticeably affected. The effect could have some long-term consequence to the individual, population or habitat. Moderate effect would equate with a "may affect" determination in USFWS Service terms and would be accompanied by a statement of "likely..." or "not likely to adversely affect" the species.

Impact Intensity	Intensity Definition
Major	An individual or population of a listed species or its critical habitat would be noticeably affected with a long-term, vital consequence to the individual, population, or habitat. Major effect would equate with a “may affect” determination in USFWS terms and would be accompanied by a statement of “likely...” or “not likely to adversely affect” the species or critical habitat.

Wildlife

Analyses of potential impacts to wildlife were based on available information about faunal communities and the extent to which these communities are affected by facility construction, habitat loss, and construction-related activities. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Intensity Definition
Negligible	Impacts occur, but are minimal and have no observable effects on wildlife and habitats.
Minor	Impacts are detectable, but the severity and timing of changes are not expected to be outside the range of natural variability and not expected to have any long-term effects on wildlife resources or habitats. Population numbers, population structure, genetic variability, and other demographic factors for wildlife species may have small, short-term changes, but long-term characteristics remain stable. Key habitat processes may have short-term disruptions that are within natural variability, and habitats remain functional.
Moderate	Impacts are detectable and the severity and timing of changes are expected to be outside the range of natural variability for short periods of time and changes within natural variability may be long term. Population numbers, population structure, genetic variability, and other demographic factors for wildlife species may have small to moderate declines, but rebound to pre-impact numbers. Species are not at risk of being extirpated from the preserve, key habitat processes may have short-term disruptions that are outside natural variability (but return to natural variability), and habitats remain functional.
Major	Impacts are detectable and the severity and timing of changes are expected to be outside the range of natural variability for long periods of time—or may even be permanent. Changes within the range of natural variability may be long term or permanent. Timing of the impacts is important with respect to wildlife species or habitat function. Population numbers and structure, genetic variability, and other demographic factors for species may experience long-term declines and long-term depressed population numbers. In extreme cases, wildlife species may be extirpated from the preserve, key habitat processes may be disrupted, or habitats may be rendered nonfunctional.

Visitor Experience/Appreciation

National Park Service, The Nature Conservancy, and the Kansas Park Trust staff observations of the following were the basis for determining potential impacts of each alternative: visitation patterns, ability of visitors to effectively experience and understand preserve resources, and extent to which visitors enjoy their visit to the preserve. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Intensity Definition
Negligible	The impact could affect visitor use, but the change would be so small that it would not be of any measurable or perceptible consequence and/or would affect few people.
Minor	The impact could affect visitor use, but the change would be slight and localized, with few measurable consequences, and/or would affect some people. The impact could be beneficial or adverse.
Moderate	The impact would result in readily apparent adverse or beneficial changes to visitor use with measurable consequences, and/or an effect on a large number of people.
Major	The impact would have a substantial adverse or beneficial effect on visitor use, and/or would affect the majority of people.

Scenic Quality

Key views and vantage points were identified from the 2000 GMP (NPS 2000a). Field observations of key views and viewsheds by National Park Service, The Nature Conservancy, and Kansas Park Trust staff were the primary basis for determining potential impacts of each alternative. Computer-generated viewshed analyses were used to substantiate which areas can be seen from key viewpoints, and conversely, which areas are blocked from view by intervening hills. For purposes of analyzing potential impacts, the thresholds of change for the intensity of an impact are defined as follows:

Impact Intensity	Intensity Definition
Negligible	The impact to visual resources is at the lowest levels of detection, barely perceptible and not measurable.
Minor	The impact to visual resources would be noticeable, but would not alter the feeling, character, or setting associated with the views of or from the preserve.

Impact Intensity	Intensity Definition
Moderate	The impact to visual resources would be more noticeable and may alter the feeling, character, or setting associated with the views of or from the preserve. Impacts can be adverse or beneficial.
Major	The impact to visual resources would be readily apparent and would alter the feeling, character, or setting associated with the views of or from the preserve. Impacts can be adverse or beneficial.

Water Quality

Water quality information was compiled from existing research reports, planning documents, and consultation with preserve specialists. Several elements were considered to determine impacts including: water rights, surface and groundwater hydrology, surface and groundwater quality and quantity, topography, and existing land use. Specific impact elements are discussed in relation to each assessed alternative. Thresholds to determine water quality impacts are defined as follows:

Impact Intensity	Intensity Definition
Negligible	The impact is barely detectable or would result in no measurable or perceptible changes in water quality.
Minor	Impacts would be measurable and localized to specific stream channels and would involve sources of pollution that do not persist in the environment.
Moderate	Impacts would be clearly detectable, would cause an appreciable change in water quality in a localized area, and would involve sources of pollution that persist in the environment.
Major	Impacts would be regional or watershed-wide and would involve sources of pollution that are persistent in the environment.

Floodplains

The planning team based the impact analysis and the conclusions for possible impacts to floodplains using on-site inspections of known and potential impacts to floodplains. Conclusions and possible impacts were also based on review of existing literature and studies, information provided by experts in the National Park Service, preserve staff, and other agencies' insights and professional judgment. The thresholds of change for impact intensity are defined as follows:

Impact Intensity	Floodplains Intensity Definition
Negligible	There would be no change in the ability of a floodplain to convey floodwaters or its values and functions. Projects would not contribute to flood flows.
Minor	Changes in the ability of a floodplain to convey floodwaters, or its values and functions, would be measurable and local. Projects would not contribute to flood flows. No mitigation would be needed for floodplain impacts.
Moderate	Changes in the ability of a floodplain to convey floodwaters or its values and functions would be measurable and local. Projects could contribute to flood flows. The impact could be mitigated by modification of proposed facilities in the floodplain.
Major	Changes in the ability of a floodplain to convey floodwaters or its values and functions would be measurable and widespread. Projects would contribute to flood flows. The impact could not be mitigated by modification of proposed facilities.

Preserve Operations

National Park Service, The Nature Conservancy, and Kansas Park Trust staff knowledge regarding operational efficiency was used to determine the intensity levels of potential impacts. For purposes of analyzing potential impacts, the threshold of change is defined as follows:

Impact Intensity	Intensity Definition
Negligible	The impact could change the preserve maintenance operations, but the change would be so small that it would not be of any measurable or perceptible consequence.
Minor	The impact could change the preserve maintenance operations, but the change would be slight and localized, with few measurable consequences.
Moderate	The impact would result in readily apparent changes to preserve maintenance operations with measurable consequences.
Major	The impact would result in a substantial adverse or beneficial change in preserve maintenance operations.

ENVIRONMENTAL CONSEQUENCES—NO-ACTION ALTERNATIVE

Historic Structures

Under the no-action alternative, incompatible uses (preserve functions and maintenance operations) of historic Spring Hill / Z Bar Ranch Headquarters would be moved to the new visitor center, administrative, and maintenance facilities in the southern portion of the preserve. Materials currently stored in the historic structures (ranch house, barn, outbuildings) would be removed. These changes would reduce the current damaging load stress on structure flooring, and would allow the National Park Service to maintain the historic consistency of the area. The beneficial effects would be minor to moderate and long term.

Cumulative Impacts. Past and present actions that have affected historic structures of the preserve include inadvertent vandalism, visitor use resulting in wear and tear, natural processes, the Bottomland Trail project in the corral area, and urban development outside the preserve. Overall cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, adverse, and minor. The no-action alternative would contribute a long-term, minor, beneficial, cumulative impact to historic structures.

Conclusion. Minor to moderate, long-term, beneficial effects to historic structures would be realized by moving visitor services and operational functions out of the historic buildings and cultural landscape. Cumulative impacts would be long-term, minor, and adverse, and the contribution of the no-action alternative would be minor and beneficial.

Section 106 Summary. Under 36 CFR 800, *Protection of Historic and Cultural Properties*, “an undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.” Under the no-action alternative, there would be no changes to historic structures. After applying the Advisory Council on Historic Preservation’s criteria of adverse effect (36 CFR 800.5), the National Park Service determined that the activities proposed in the no-action alternative would have no adverse effect to historic structures.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve’s establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve’s GMP or other relevant NPS planning documents, impairment of historic structures would be unlikely.

Archeology

There are no known archaeological resources within the area currently designated as visitor information and orientation (Jones 1999). If, during construction, any previously unknown archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed, in consultation with the Kansas SHPO and other appropriate consulting parties, including affiliated tribes. Therefore, the no-action alternative would have no or negligible impacts on archaeological resources.

Cumulative Impacts. It would be expected that past development in the surrounding region has damaged archeological resources. Past, present, and reasonably foreseeable future projects with the potential to affect archeological resources include the possible construction of trails, roads, and use of ranch headquarters by visitors and preserve employees. The no-action alternative would not contribute to cumulative impacts.

Conclusion. The no-action alternative would have no or negligible impacts on archeological resources, nor would it contribute to cumulative impacts.

Section 106 Summary. Under 36 CFR 800, *Protection of Historic and Cultural Properties*, “an undertaking is considered to have an adverse effect when the effect on a historic property may

diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.”

Under the no-action alternative, there would be no changes to archeological resources. After applying the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR 800.5), the National Park Service determined that the activities proposed in the no-action alternative would have no adverse effect on archeological resources.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of archeological resources would be unlikely.

Cultural Landscapes

The proposed development site for the no-action alternative is located on the southern boundary of the preserve near the corral area of the cultural landscape. The construction of new facilities would introduce new uses and inconsistent elements into the cultural landscape; however, the integrity of this area has already been diminished by modification outside the local period of significance for the national landmark (Bahr Vermeer Haecker Architects 2004). Therefore, the new facilities would not interfere with the overall integrity of the cultural landscape. The effects of the no-action alternative on cultural landscapes would be long-term, minor, and adverse.

Removal of visitor services and administrative/maintenance functions from the historic Spring Hill / Z Bar Ranch Headquarters would benefit the cultural landscape. The beneficial effects would be minor and long-term.

Cumulative Impacts. Past and present actions that have affected the preserve's cultural landscapes include visitor use, natural processes, the Bottomland Trail project in the corral area, and urban development and loss of tallgrass prairie outside the preserve. Reasonably foreseeable future actions that might affect cultural resources in the preserve include the future expansion of St. Anthony Cemetery and continued development outside the preserve, especially that which is predominantly visible from the cultural landscape. Overall cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, minor to moderate, and adverse. The no-action alternative would have a long-term, minor, adverse, cumulative impact.

Conclusion. Impacts to cultural landscapes associated with development of the new facilities would be long-term, minor, and adverse. Minor, long-term, beneficial effects to cultural landscapes would be realized by moving visitor services and operational functions out of the historic buildings and this part of the cultural landscape. The no-action alternative would contribute a long-term, minor, and adverse cumulative impact.

Section 106 Summary. Under 36 CFR 800, *Protection of Historic and Cultural Properties*, “an undertaking is considered to have an adverse effect when the effect on a historic property may

diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.”

Under the no-action alternative, there would be no changes to cultural landscapes. After applying the Advisory Council on Historic Preservation criteria of adverse effect (36 CFR 800.5), the National Park Service determined that the activities proposed in the no-action alternative would have no adverse effect to cultural landscapes.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of cultural landscapes would be unlikely.

Soils

New facilities would be constructed adjacent to the southern boundary of the preserve on a site that currently supports relatively intact tallgrass prairie habitat. This alternative would result in the direct loss and/or disturbance of the extant prairie soils. Water infiltration would decrease over the developed area and corresponding surface runoff and downslope soil erosion potential would increase, although facilities would be sited and designed to minimize such effects. Increased levels of soil erosion could result in increased rates of sedimentation to Fox Creek. Impacts due to surface runoff at higher velocity and soil erosion would be short- and long-term, adverse, and minor to moderate in intensity.

Soil horizons are characterized by a moderate shrink-swell potential, but occur over relatively shallow shale bedrock and are therefore not expected to adversely affect building foundations (USDA 1974).

Cumulative Impacts: A number of past and planned activities have or could affect soil condition and processes in and near the preserve. Historic grazing, for example, may have resulted in minor levels of soil compaction caused by physical trampling of soils. Soil compaction may be associated with degraded habitat for soil microorganisms, inhibited nutrient cycling, and reduced water infiltration rates following precipitation. Residential, commercial, and infrastructure construction, installation of a new water supply line for the preserve (recent past), and possible future expansion of St. Anthony Cemetery also result in impacts to soils. Overall cumulative impacts from past, present, and reasonably foreseeable actions would be local, long-term, minor to moderate, and adverse. Implementation of the no-action alternative would have a short- and long-term, minor to moderate, adverse contribution to cumulative impacts.

Conclusion. Impacts to soils from the no-action alternative would be short- and long-term, adverse, and minor to moderate in intensity. Cumulative impacts would also be short- and long-term, adverse, and minor to moderate. The contribution of the no-action alternative to cumulative impacts would be minor to moderate and adverse.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of soils would be unlikely.

Prime and Unique Farmlands

The no-action alternative site for the new facilities is on farmland of statewide importance. The predominant soil is the Clime-Sogn complex, (3% to 20% slopes). Impacts would be associated with alteration and/or loss of as much as 8.0 acres of potential farmland. There would be no impacts to prime farmland from construction of new facilities on the no-action alternative site. There would be short- and long-term, site-specific, moderate impacts on farmland of statewide importance.

Cumulative Impacts. Past and present actions that have affected farmlands include conversion of the tallgrass prairie within the Southeastern Great Plains Tallgrass Prairie Ecological System to agriculture; nonnative hayfields; farmsteads, ranch operation centers, and corrals; urban areas; and infrastructure. Most recently, potential farmland within the preserve was disturbed by installation of a new waterline to provide potable water to the preserve. Any prairie restoration activities could also affect farmlands. Reasonably foreseeable future actions that would affect prime farmlands or farmlands of statewide importance include expansion of St. Anthony Cemetery. Cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, negligible to minor, and adverse because of conversion of cultivated lands to natural tallgrass prairie or facilities. The no-action alternative site for the new facilities is on farmland of statewide importance and construction activities would contribute short- and long-term, minor, adverse, cumulative impacts.

Conclusion. There would be impacts related to removal and/or covering over of up to 8.0 acres of farmlands of statewide importance in constructing the proposed Tallgrass Prairie National Preserve facilities and utilities. However, of the 10,741 acres of prime farmlands and farmlands of statewide importance in the preserve, the proposed activities would directly affect only approximately 0.06% of these lands. The no-action alternative would result in short- and long-term, site-specific, moderate, adverse impacts to farmland of statewide importance. On a regional scale, however, this would have a negligible, long-term, adverse effect.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of prime and unique farmlands would be unlikely.

Vegetation

The no-action alternative site for the new facilities is within the preserve and supports a tallgrass prairie ecological system mostly composed of native grasses including big bluestem,

sideoats, grama, Indiangrass, buffalo grass, and little bluestem. Impacts would be associated with alteration and/or loss of as much as 8.0 acres of tallgrass prairie habitat. Nonnative plant species may increase locally due to increased transportation of seeds into the area and by disturbance of native vegetation and soils. Impacts to plant communities from construction of new facilities on the no-action site would be short- and long-term, adverse, and minor to moderate.

Cumulative Impacts. Past and present actions that have affected native plant communities include conversion of the tallgrass prairie within the Southeastern Great Plains Tallgrass Prairie Ecological System to agriculture, nonnative hayfields, farmsteads, ranch and feed lot operation centers, corrals, urban areas, and infrastructure. Most recently, tallgrass prairie within the preserve was disturbed by installation of a new waterline to provide potable water to the preserve. Reasonably foreseeable future actions that would affect the local plant communities include expansion of St. Anthony Cemetery. Overall cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, moderate to major, and adverse due to loss of remnant tallgrass prairie habitat on a continental scale. The no-action alternative would contribute short- and long-term, minor, adverse impacts to cumulative impacts.

Conclusion. Adverse impacts to plant communities would be short and long term, and minor to moderate. Cumulative impacts to plant communities from past, present, and reasonably foreseeable actions would be long-term, moderate to major, and adverse. The contribution of the no-action alternative to cumulative impacts would be short- and long-term, minor, and adverse.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of vegetation and tallgrass prairie would be unlikely.

Threatened and Endangered Species

The federally endangered Topeka shiner occurs in Fox Creek and three unnamed tributaries on the west side of the preserve. There would be no direct or indirect impacts to the tributaries or to the Topeka shiner from construction of the facilities under the no-action alternative.

The federally endangered Neosho madtom may occur in the Cottonwood River of which Fox Creek is a tributary. Neosho madtoms have not been found within the preserve.

The federally threatened bald eagle ranges over large areas and is an occasional transient to the preserve, but there are no known nesting sites in the vicinity. The potential sites for new facilities are not vital for bald eagle foraging or roosting. Construction-related activities and noise could potentially disturb bald eagles using areas near the construction site, but such impacts would be temporary (lasting only until construction is completed) and negligible.

No impacts to threatened, endangered, or candidate species, or species of special concern are anticipated from implementation of the no-action alternative.

Cumulative Impacts. Past and present actions that have affected native habitats of the preserve include conversion of the tallgrass prairie within the Southeastern Great Plains Tallgrass Prairie Ecological System to agriculture, nonnative hayfields, farmsteads, ranch and feed lot operation centers and corrals, urban areas, and infrastructure. Most recently, tallgrass prairie within the preserve was disturbed by installation of a new waterline to provide potable water to the preserve. Future actions in and near the preserve include highway construction and maintenance, trail construction and maintenance, watershed and stock pond development, stream alterations, de-watering, land management, and introduction of nonnative species that could impact endangered species or their riparian habitats. Cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, minor to moderate, and adverse for the Topeka shiner and Neosho madtom. The no-action alternative would not contribute to cumulative impacts.

Conclusion. There would be no impacts to threatened or endangered species from the implementation of the no-action alternative. The no-action alternative would not contribute negative impacts to the cumulative impact scenario.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of threatened or endangered species would be unlikely.

Wildlife

The no-action alternative site for the new facilities is within the preserve and supports tallgrass prairie habitats. The area supports migratory birds and small mammals, with larger mammals including deer occasionally using the habitats. Impacts would be associated with alteration and/or loss of up to 8.0 acres of tallgrass prairie habitat.

The greater prairie chicken is declining throughout the Midwest and occurs on lands of the preserve. Small mammals that use the site would be adversely affected through displacement, direct mortality, and habitat loss. Large construction equipment and the associated noise and disturbance may result in local, short-term, adverse effects to birds that use habitat in and adjacent to the proposed site. Impacts to wildlife from construction of new facilities on the no-action alternative site would be short- and long-term, adverse, and minor to moderate.

Cumulative Impacts. Past and present actions that have affected wildlife include conversion of native tallgrass prairie to agricultural lands and urban development outside the preserve. Reasonably foreseeable future actions that could affect wildlife include future expansion of St. Anthony Cemetery (from the loss of tallgrass prairie habitat near the preserve). Future actions in and near the preserve include highway construction and maintenance, trail construction and maintenance, watershed and stock pond development, stream alterations, de-watering, land management, and introduction of nonnative species that could impact wildlife or their

habitats. Overall cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, major, and adverse due to loss of tallgrass prairie habitat on a continental scale. The no-action alternative would contribute short- and long-term, minor, adverse impacts to the cumulative impacts.

Conclusion. Impacts to wildlife would be short- and long-term, adverse, and minor to moderate. The contribution of the no-action alternative to cumulative impacts would be short- and long-term, adverse, and minor.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of wildlife would be unlikely.

Visitor Experience/Appreciation

Under the no-action alternative, a visitor center and other operational facilities would be constructed near the intersection of SH 177 and U.S.50. Visitor information and orientation services, the amphitheater, gift and book sales, and offices would be moved from the ranch house to the new visitor center. This would reduce the frequent activity in the ranch house, making additional ranch house rooms available for display of historic furnishings and interpretation, and enhancing the historic setting.

Once the visitor transportation system envisioned by the 2000 GMP is in place, visitor vehicles and buses would no longer be parked at the ranch complex, during the prime visitor season (visitors would park at the new center and be shuttled to the ranch complex). Moreover, stored NPS vehicles, equipment, and materials would be moved to the new maintenance facility. These actions would enhance the historic ambiance of the ranch environment.

The new visitor center would be wheelchair accessible; however, removable ramps and other accommodations would continue to be required at the ranch house. The visitor center would include space for interpretive displays to communicate interpretive themes and educational messages. Outdoor options for visitors (picnicking, outdoor amphitheater) would be associated with the visitor center. The no-action alternative site would provide access to the Bottomland Trail via a new trail link.

The new visitor facilities at the no-action alternative site would provide improved information and orientation, interpretive services, and recreational opportunities compared to that which is currently available at the ranch house, resulting in long-term, major, beneficial impacts to visitor experience. However, the proximity of the new facilities to the Bottomland Trail could detract from the experiences of visitors using the trail, which would constitute a long-term, minor, adverse impact.

Cumulative Impacts. The Bottomland Trail was opened for use in 2003, widening the range of visitor opportunities available at this relatively new national park unit. The preserve also recently implemented a living history program at the ranch house, and an outdoor symphony

concert was held in the summer of 2006, with other visitor opportunities (more hiking and possible equestrian opportunities, etc.) planned for future years, as envisioned by the 2000 GMP. Overall, the cumulative impact of additional visitor opportunities would be long-term, moderate, and beneficial. The no-action alternative would contribute long-term, major, beneficial impacts to cumulative impacts.

Conclusion. The impacts of the no-action alternative to visitor experience/appreciation would be long-term, major, and beneficial, as would the contribution to cumulative impacts.

Scenic Quality

A new visitor center; administrative, maintenance, and transportation support facilities; and visitor and staff parking would be constructed along the southern boundary of the preserve. The no-action alternative site, which is located over 2 miles from the historic Spring Hill / Z Bar Ranch Headquarters, is difficult to see from the ranch. Much of the site is hidden by rolling hills, as verified by a computer-generated viewshed analysis conducted in 2003. The cemetery (located north of the no-action alternative site) serves to fragment the view from the ranch even more. The no-action alternative site is located in an area where other human-built features (e.g., St. Anthony Cemetery, the grain silo, and U.S. 50) are scarcely visible near the horizon. Because of the presence of these built features, the proposed facilities would blend into the surrounding landscape. The same characteristics would make the facilities inconspicuous from the high ridges within the preserve east of Fox Creek.

The no-action site is visible from the Bottomland Trail. A visitor center and other facilities constructed at the no-action site would be apparent to visitors using the trail, in large part because the site slopes toward the trail and the valley bottom with no intervening landscape. With thoughtful design, however, the visual impact of the facilities could be minimized.

Views from the site are relatively poor looking to the west and south. However, facilities could be designed and oriented to minimize these views, while highlighting exceptional views of tallgrass prairie and the cemetery to the north and bottomland forest to the east.

Considering most vantage points, impacts to scenic quality from construction of new facilities on the no-action site would be long-term, adverse, and minor with thoughtful siting and design (see figure 3 and mitigation for design criteria).

Cumulative Impacts. Past impacts on scenic quality in and around the preserve have mostly resulted from introduction of nonrural land uses and development such as U.S. 50 and the associated overpass and highway traffic, truck traffic on SH 177, and the KDOT highway materials site. Future actions could conceivably include additional urban or suburban development encircling the preserve, but such development is considered unlikely for the foreseeable future. Overall, cumulative impacts would be long-term, minor, and adverse, assuming that NPS facilities are designed to take best advantage of the exceptional views while minimizing less engaging ones. The no-action alternative would contribute long-term, minor, adverse impacts to cumulative impacts.

Conclusion. Impacts to scenic quality from developing facilities on the no-action alternative site would be long-term, adverse, and minor with thoughtful siting and design. The no-action alternative would make a long-term, minor, and adverse contribution to cumulative impacts.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of scenic quality would be unlikely.

Water Quality

The no-action alternative site for the new facilities is within the preserve and supports a tallgrass prairie ecological system. Implementing the no-action alternative would remove much of the native vegetation and replace it with buildings, pavement, and native landscaping. The construction contract for the new facilities would stipulate compliance with a stormwater pollution prevention plan. With implementation of a stormwater pollution prevention plan, construction-related impacts to water quality (soil disturbance, sedimentation, and increased stormwater runoff) would likely be temporary, adverse, and negligible. The stormwater prevention plan would outline measures to slow, reduce and/or contain stormwater runoff, sedimentation, and release of contaminants. Following construction of the new facilities, impervious surfaces (parking lots, roofs, sidewalks, etc.) would cover much of the site, reducing stormwater permeation to subsurface soils. Stormwater runoff would increase and as a result, small quantities of contaminants including oil, antifreeze, and oxidized metals from visitor center parking areas would be transported in stormwater runoff into streams. Water quality impacts from changes in land use are expected to be long-term, adverse, and minor.

Cumulative Impacts. Regional urban, suburban, and rural development, with associated increased stormwater runoff, sedimentation, and introduction of contaminants into streams and rivers, has occurred locally. Future actions in and near the preserve include highway construction and maintenance, trail construction and maintenance, watershed and stock pond development, stream alterations, de-watering, land management, farming, ranching, and feed lot operations, and slight expansion of St. Anthony Cemetery. Overall cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, minor to moderate, and adverse. The no-action alternative would contribute long-term, minor, adverse impacts to cumulative impacts.

Conclusion. Impacts to water quality from implementation of the no-action alternative would be long-term, minor, and adverse. The no-action alternative would contribute long-term, minor, adverse effects to cumulative impacts

Floodplains

The no-action site is located outside the 100-year floodplains of Fox Creek and the Cottonwood River (FEMA Flood Insurance Rate Map No. 200040-0005B, 1990).

Prior to planning and design of the new facilities, a qualified hydrologist would delineate the 100- and 500-year floodplains to ensure that facility construction does not occur within floodplains. Hazardous materials storage areas and storage/display of curatorial items are class II actions and are required to be placed outside of or protected from the 500-year floodplain. The topography of the site indicates that it is possible to locate all facilities above the 100-year floodplain and to locate facilities outside of the 500-year floodplain (NPS, Smilie 2003b). Therefore, there would be no impacts to floodplains from the no-action alternative.

Cumulative Impacts. Regional urban and suburban development, with associated increased stormwater runoff and sedimentation has occurred locally. Future actions near the preserve could include additional highway and urban construction. Overall cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, minor to moderate, and adverse. The no-action alternative would not contribute to cumulative impacts.

Conclusion. The no-action alternative would not result in impacts to floodplains, nor would it contribute to cumulative impacts.

Preserve Operations

Preserve operations would be consolidated at the new facilities complex. Daily communications and management would improve due to the proximity of the preserve management staff in one complex and the main visitor hub (the new visitor center and the historic Spring Hill / Z Bar Ranch Headquarters). Impacts to preserve operations would be long-term, beneficial, and minor to moderate.

Cumulative Impacts. As operations at the relatively new national park continue to expand, management responsibilities for the preserve staff would increase. The overall cumulative impact of the no-action alternative would be long-term, beneficial, and minor. The no-action alternative would contribute long-term, minor to moderate beneficial impacts to the cumulative impacts.

Conclusion. Impacts to preserve operations would be long-term, beneficial, and minor to moderate. The contribution of the no-action alternative to cumulative impacts would be beneficial, long-term, and minor to moderate.

ENVIRONMENTAL CONSEQUENCES—PREFERRED ALTERNATIVE

Space estimates for the buildings and structures are estimated at 1.7 acres for the combined visitor information and administrative center and 2.3 acres for the maintenance facilities (see table 2 in chapter 1). The management areas in the preferred alternative are proposed slightly larger to provide flexibility in layout and location of facilities. The management area for the visitor information and administrative center would be approximately 7.0 acres located south of the ranch headquarters along the west side of SH 177. The management area for the maintenance facilities would be approximately 6.0 acres along CR 227 located east of the sewage lagoons. The environmental consequences are analyzed for the entire proposed management area.

Historic Structures

Proposed Flint Hills Ranching Legacy Revision

Modifying the designation of this parcel from visitor information and orientation management area to Flint Hills ranching legacy area would not directly affect historic structures. Redesignation would exclude future major construction in this area, and any future indirect impact to the corral, resulting in a long-term, negligible to minor, beneficial impact on historic structures.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

Under the preferred alternative, incompatible uses (preserve functions and maintenance operations) of historic Spring Hill / Z Bar Ranch Headquarters would be moved to the new visitor center, administrative, and maintenance facilities in the southern portion of the preserve. Materials currently stored in the historic structures (ranch house, barn, outbuildings) would be removed. These changes would reduce the current damaging load stress on structure flooring, and would allow the National Park Service to maintain the historical consistency of the area. The impacts would be similar to the no-action alternative and beneficial, minor to moderate, and long-term.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

Maintenance equipment and functions would be moved from the historic Spring Hill / Z Bar Ranch Headquarters to a new facility near the sewage lagoons. The impacts to the structures at ranch headquarters would be similar to the no-action alternative and long-term, beneficial, and minor to moderate.

The proposed maintenance facility site contains a historic corrugated steel barn used for storage that is located at the south boundary of the parcel. A low stone fence is built along the east side of the parcel and would not be impacted. The storage barn has been recommended for NRHP evaluation for determination of eligibility. The barn would likely be used to store preserve maintenance equipment and materials. Introduction of nontraditional uses into this area would impact this historic feature; however, the anticipated use is not dissimilar to the barn's original purpose. Use of the barn by preserve staff would ensure maintenance of the structure would be ongoing. There would be a long-term and negligible impact to historic structures in this area.

Cumulative Impacts. Past and present actions that have affected historic structures of the preserve include vandalism, visitor access, natural processes, the Bottomland Trail project in the corral area, and urban development outside the preserve. Reasonably foreseeable future actions that might affect historic structures of the preserve include future expansion of St. Anthony Cemetery and continued development outside the preserve, especially that which is visible from the cultural landscape. The past and present actions have resulted in a long-term

minor, adverse impact to historic structures. The preferred alternative, including impacts at the visitor center and administrative site, the maintenance site, and the addition to the Flint Hills ranching legacy area, would contribute to cumulative impacts, and this contribution would be long-term, negligible to minor, and beneficial.

Conclusion. Impacts to historic structures associated with development of the new facilities would be long-term, minor, and adverse. Minor, long-term, beneficial impacts to historic structures would be achieved by moving visitor services and operational functions out of the historic buildings. The contribution of the preferred alternative to cumulative impacts would be long-term, negligible to minor, and beneficial.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of historic structures would be unlikely.

Section 106 Summary. After applying the Advisory Council on Historic Preservation criteria of adverse effect (36 CFR 800.5), the National Park Service concludes that implementation of the preferred alternative would have no adverse impacts on historic structures at Tallgrass Prairie National Preserve.

Archeology

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to Flint Hills ranching legacy area would not directly affect archeological resources. Redesignation would exclude future major construction in this area, and any future direct or indirect impact to archeological resources. Therefore, impacts on potential archeological sites would be negligible.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

The proposed location of the visitor center contains evidence of past use and habitation that may or may not be associated with ranching activities. Subsurface features and artifacts relating to prehistoric and historic occupations may still be present. It has been recommended that limited preconstruction investigations, including remote sensing, should be undertaken to confirm that no other significant historic archeological material or features are present. There would be site-specific, long-term, negligible to minor, adverse impacts to archeological resources in this area.

If, during construction, any previously unknown archeological resources are discovered, work would be halted in the discovery area, the site secured, and preserve staff would consult

according to 36 CFR 800.13 and, as appropriate, with the Kansas SHPO and the provisions of the Native American Graves Protection and Repatriation Act of 1990. In compliance with the act, the National Park Service would also notify and consult concerned American Indian tribal representatives for the proper treatment of human remains, funerary, and sacred objects should these be discovered during the project. Inadvertent archeological discoveries would result in a long-term negligible to minor site-specific adverse impact, depending on the nature of the archeological find.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

The proposed location of the maintenance facility was explored for archeological resources using limited shovel tests. No archeological materials were identified. Shovel tests also indicated the area has not been previously disturbed by construction, but has been previously disturbed by erosion. Construction in this parcel would be unlikely to adversely affect significant, unrecorded, subsurface archeological resources. No further investigations are recommended and no impacts are anticipated.

Cumulative Impacts. It is likely that past development in the surrounding region has damaged archeological resources. Past, present, and reasonably foreseeable future projects with the potential to affect archeological resources include ranching activities; ranch road maintenance; controlled burns of grassland; new urban and rural development, and proposed development of the new visitor center, administrative, and maintenance facilities. Visitors may inadvertently disturb unidentified archeological sites near roads, trails, and in other areas of the preserve through trampling, artifact collection, and recreational activities. The cumulative impact of these past, present, and reasonably foreseeable future actions would be long-term, minor to moderate, and adverse, depending on the resource and the significance of the site. The preferred alternative would contribute a long-term, negligible, adverse, cumulative impact to archeological resources.

Conclusion. With mitigation, the effect would be a long-term negligible to minor site-specific adverse impact, depending on the nature of the archeological find. The preferred alternative would contribute a long-term, negligible, adverse, cumulative impact to archaeological resources.

Section 106 Summary. Under the preferred alternative, mitigation for this parcel would be effective in reducing or eliminating potential impacts to the archeological site within the area of potential effect. If an inadvertent archeological site is discovered, the section 106 process would be initiated and the Advisory Council on Historic Preservation's criteria of adverse effect (36 CFR 800.5) would be applied, resulting in a determination of *no adverse effect*.

Cultural Landscapes

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to Flint Hills ranching legacy area would not directly affect the cultural landscape. Redesignation would exclude future major construction in this area, and any future direct or indirect impact to the landscape. This portion of the landscape is already impacted by human-made intrusions—highways and urban development. Therefore, impacts to the cultural landscape in the southern portion of the preserve would be long-term, negligible to minor, and beneficial.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

The cultural landscape would be directly and indirectly affected by the preferred alternative. Construction of the new visitor center, administrative, and maintenance facilities, parking areas, and visitor support facilities would remove visitors and preserve operations from the historic Spring Hill / Z Bar Ranch Headquarters, which would benefit the cultural landscape. Concurrently, construction of modern nontraditional use facilities in the historic rural landscape would have an adverse impact on pasture that is a component of the cultural landscape and a national historic landmark. The preferred alternative development site is on the west side of SH 177, and within a previously disturbed area. This new construction would result in a major, long-term adverse impact to the cultural landscape and national historic landmark. The new visitor information and administrative center would be designed to blend into and harmonize with the character of the landscape and be as visually unobtrusive as possible. Design treatments and criteria are included in mitigation measures in chapter 2. Incorporating these mitigation measures would reduce the overall impact to the landscape and national historic landmark; and therefore, the effects of the preferred alternative on cultural landscapes would be long-term, moderate, and adverse.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

The cultural landscape would be indirectly affected by construction of the maintenance facility. The proposed location is next to the Strong City sewage lagoons. The cultural landscape in that area has been previously disturbed; therefore, the effects of construction of the proposed maintenance facility would be long-term, minor, and adverse.

Cumulative Impacts. Past and present actions that have affected cultural landscapes of the preserve include visitor access and urban development outside the preserve. Reasonably foreseeable future actions that might affect cultural landscapes in the preserve include construction of the new visitor center, administrative, and maintenance facilities; future expansion of St. Anthony Cemetery; and continued development outside the preserve, especially that which is visible from the cultural landscape. These actions have resulted in a long-term, minor to moderate, adverse impact to cultural landscapes. The preferred alternative

would contribute a long-term, adverse, and moderate, cumulative impact to cultural landscapes.

Conclusion. Impacts to cultural landscapes associated with development of the new facilities would be long-term, moderate, and adverse. Minor, long-term, beneficial effects to cultural landscapes would be achieved by removing visitor services and operational functions from the historic buildings and the cultural landscape of the historic Spring Hill / Z Bar Ranch Headquarters. The contribution of the preferred alternative to cumulative impacts would be long-term, moderate, and adverse.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of cultural landscapes would be unlikely.

Section 106 Summary. After applying Advisory Council on Historic Preservation criteria of adverse effect (36 CFR 800.5), implementation of the preferred alternative could have an adverse effect on cultural landscapes at Tallgrass Prairie National Preserve. The National Park Service should consult with the Kansas SHPO during the design phase to ensure adverse impacts to the cultural landscape are minimized.

Soils

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to Flint Hills ranching legacy area would not directly affect soils. Redesignation would exclude future major construction in this area, and any future direct and indirect impacts to soils. The redesignation would remove a net gain of 68.0 acres from potential future construction resulting in localized, long-term, minor, beneficial impacts.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

New facilities would be constructed in a previously disturbed area—the former location of ranch buildings that have since been removed. Soil disturbance is apparent by the invasion of nonnative plant species. While most of the parcel has been disturbed, it is possible that isolated areas of undisturbed soils would be adversely impacted as a result of construction. Approximately 4.4 acres would be permanently affected by construction of the new visitor center, administrative facility, and parking areas. In addition, some increased soil compaction could occur as a result of increased visitation to the area. However, that compaction would occur in concentrated, previously disturbed, high-traffic areas; therefore, impacts to soils would be localized, short- and long-term, negligible to minor, and adverse.

Soil horizons are characterized by a moderate-to-high shrink-swell potential, which would adversely impact building foundations. Proper engineering, design, and construction would be required to reduce adverse impacts to a negligible to minor designation.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

The maintenance facility and grounds would be constructed adjacent to the existing sewage lagoons. This area has been previously disturbed and soils were impacted during construction of the lagoons. It is possible there may be small isolated areas of undisturbed soils that have not been impacted by the previous construction activity. Increased vehicle and pedestrian traffic would result in soil compaction over the long term. Approximately 2.8 acres would be permanently affected by the construction of the maintenance facility and parking areas. The impacts to soils would be localized, short- and long-term, negligible to minor, and adverse. Soil horizons are characterized by a moderate-to-high shrink-swell potential that would adversely impact building foundations. Proper engineering, design, and construction would be required to reduce adverse impacts to a negligible to minor designation.

Cumulative Impacts: Past and ongoing activities have affected or could potentially affect soil conditions and processes in and near the preserve. Historic grazing may have resulted in minor soil compaction caused by physical trampling of the soil. Construction in the surrounding area of the preserve, installation of a new water supply line (recent past), and possible future expansion of St. Anthony Cemetery all contribute to a long-term minor to moderate impact to soils. The contribution to cumulative impacts of the visitor center and administrative and maintenance sites of the preferred alternative would be long-term, negligible, and adverse. The addition to the Flint Hills ranching legacy area would contribute long-term, negligible to minor, beneficial impacts to cumulative impacts.

Conclusion: Impacts to soils and soil processes would be localized, short- and long-term, adverse, and negligible to minor. Cumulative impacts to soils would be long-term minor and adverse. The contribution of the preferred alternative to cumulative impacts would be long-term, negligible, and adverse at the visitor center, and long-term, negligible, and beneficial at the Flint Hills ranching legacy area.

Prime and Unique Farmlands

Proposed Flint Hills Ranching Legacy Revision

Modifying the designation of this parcel from visitor information and orientation management area to Flint Hills ranching legacy area would not directly affect prime farmlands. The site soils are the Clime-Sogn complex, which is considered farmland of statewide importance. Redesignation would preclude future major construction on 68.0 acres, resulting in no impact to prime farmlands and localized, long-term, minor, beneficial impacts to farmland of statewide importance. This soil type is likely within the 500-year floodplain.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

The preferred alternative would result in direct and indirect impacts to prime farmlands. The site includes one soil type considered prime farmland: Martin silty clay loam, 3% to 7% slopes.

Facilities would be constructed on the proposed visitor center / administrative parcel and visitor information and orientation area abutting the west right-of-way of SH 177.

Approximately 4.4 acres of prime farmland soils would be disturbed due to construction of the new visitor center, administrative facilities, visitor parking area, amphitheater, and outdoor exhibits, and trails. Potential farmland would be removed during earthwork to support facility construction, trenching for utilities, and paving. Of the preserve's 10,894 acres, 10,741 acres are classified as prime farmlands or farmlands of statewide importance. The preferred alternative would affect 4.4 designated acres and would result in short- and long-term, site-specific, moderate, adverse impacts to prime farmlands.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

Facilities would be constructed on the proposed maintenance parcel and visitor information and orientation area located on the east boundary of the Strong City sewage lagoons. The site is composed almost entirely of Martin silty clay loam, 3% to 7% slopes, and is considered prime farmland. Currently, approximately 500 acres along Fox Creek on the preserve are leased for brome hay production. Approximately 2.8 acres of prime farmland would be disturbed. Prime farmland would be removed during earthwork to support facility construction, trenching for utilities, and paving. The preferred alternative would result in short- and long-term, site-specific, moderate, adverse effects to prime farmlands.

Cumulative Impacts. Past and present actions that have affected farmlands include conversion of the tallgrass prairie within the Southeastern Great Plains Tallgrass Prairie Ecological System to agriculture; farmsteads, ranch operation centers, and corrals; urban areas; and infrastructure. Most recently, potential farmlands within the preserve was disturbed by installation of a new waterline to provide potable water to the preserve. Reasonably foreseeable future actions that would affect prime farmlands or farmlands of statewide importance include expansion of St. Anthony Cemetery. Cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, negligible to minor, and adverse because of conversion of cultivated lands to natural tallgrass prairie. The visitor center and administrative site aspect of the preferred alternative would contribute a long-term, negligible to minor, adverse impact. The addition to the Flint Hills ranching legacy area would contribute long-term, negligible to minor, beneficial impacts. The maintenance site would contribute long-term, negligible to minor, adverse impacts.

Conclusion. There would be impacts related to removal and covering over of approximately 7.2 acres of prime farmlands in constructing the proposed Tallgrass Prairie National Preserve facilities and utilities. However, of the 10,741 acres of prime farmlands and farmlands of statewide importance in the preserve, the proposed activities would directly affect 0.06% percent of farmlands so designated. The preferred alternative would result in short- and long-

term, site-specific, moderate, adverse impacts to prime farmlands. On a regional scale, this would have a negligible, long-term, adverse effect.

Impairment. The preferred alternative would result in short- and long-term, site-specific, moderate, adverse impacts and a regional, negligible, long-term, adverse impact to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents. Because the consequent impact levels range from negligible to moderate, impairment of prime farmlands and farmlands of statewide importance would be unlikely.

Vegetation

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to Flint Hills ranching legacy area would not directly affect vegetation resources. Redesignation would preclude future major construction in this area, and associated future direct and indirect impacts to vegetation. The redesignation would remove 68 acres from potential future construction. This action would result in localized, long-term, minor to moderate, beneficial impacts to native tallgrass prairie vegetation.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

The preferred alternative would result in direct and indirect impacts on existing native and nonnative vegetation and on elements of the Southeastern Great Plains Tallgrass Prairie Ecological System occurring adjacent to and within the preserve.

Facilities would be constructed on the proposed visitor center / administrative parcel and visitor information and orientation area site abutting the west right-of-way of SH 177. Approximately 4.4 acres of moderately aged trees and native, mixed, and nonnative prairie vegetation would be disturbed due to construction of the new visitor center, administrative facilities, visitor parking area, amphitheater, outdoor exhibits, and trails. The mixed native and nonnative vegetation would be removed during earthwork to support facility construction, trenching for utilities, and paving. Small areas of landscaping using native plant species would occur on temporarily disturbed sites and in planned landscaping elements following earth preparation and construction. The preferred alternative would result in short- and long-term, site-specific, minor, adverse impacts to native tallgrass prairie, mixed tallgrass prairie, and nonnative vegetation.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

Facilities would be constructed on the proposed maintenance parcel and visitor information and orientation area site located on the east boundary of the Strong City sewage lagoons. Approximately 2.8 acres of dense, nonnative smooth brome hay meadow would be disturbed. There would be no impacts to the stand of riparian trees located on the eastern boundary of this site (occurs with the historic stone fence along the wooded hillside). The nonnative vegetation would be removed during earthwork to support facility construction, trenching for utilities, and paving. Small areas of landscaping using native species would occur on temporarily disturbed sites and in planned landscaping elements following earth preparation and construction. The preferred alternative would result in short- and long-term, site-specific, negligible, adverse effects to nonnative vegetation.

Cumulative Impacts. Past and present actions that have affected native plant communities include conversion of the tallgrass prairie within the Southeastern Great Plains Tallgrass Prairie Ecological System to agriculture; nonnative hay meadows; farmsteads, ranch and feed lot operation centers, and corrals; urban areas; and infrastructure. Recently, tallgrass prairie within the preserve was disturbed by installation of a new waterline to provide potable water to the preserve. Reasonably foreseeable future actions that would affect plant communities include expansion of St. Anthony Cemetery. Cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, moderate to major, and adverse because of loss of disturbed elements of remnant tallgrass prairie habitat on a continental scale. The visitor center and administrative site aspect of the preferred alternative would contribute a long-term, negligible, adverse impact. The addition to the Flint Hills ranching legacy area would contribute long-term, negligible to minor, beneficial impacts. The maintenance site would make no contribution because the impacts to vegetation are negligible.

Conclusion. There would be impacts related to removal and covering over of approximately 7.3 acres of mixed native/nonnative and nonnative plant communities due to construction of the proposed facilities and utilities. However, 68 acres of tallgrass prairie would be preserved, resulting in a minor, long-term, beneficial effect. Cumulative impacts to tallgrass prairie from conversion to agriculture, nonnative pastures, farmsteads, ranch operation centers and corrals, urban areas, and infrastructure would be long-term, adverse, and moderate to major. The preferred alternative would contribute long-term, negligible to minor, beneficial impacts.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of vegetation and tallgrass prairie would be unlikely.

Threatened and Endangered Species

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to Flint Hills ranching legacy area would not directly affect threatened and endangered species. Redesignation would exclude future major construction in this area, and any future direct and indirect impacts to threatened and endangered species. The redesignation would remove 68.0 acres from potential future construction. Threatened and endangered species and their habitats would not be directly or indirectly affected by this alternative.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

The preferred alternative would not result in direct impacts to the Topeka shiner, Neosho madtom, or bald eagle. All three species use aquatic and riparian habitats. The Topeka shiner occurs in the tributary immediately south of the preferred alternative site. The Neosho madtom occurs downstream of the preserve in the Cottonwood River. The bald eagle may use (no documented nesting) riparian gallery forests lining Fox Creek as it flows through the preserve, and the Cottonwood River, downstream from the preserve. The preferred alternative would not construct the visitor center and associated parking areas within the riparian habitats of these waterways. No riparian gallery forest habitat is planned for removal. There would be no fill placement in or dredging of wetlands or other waters of the United States.

Indirect impacts to threatened or endangered species may include sediment releases from the construction site as a short-term, negligible to minor, adverse impact. Sediment releases could also occur following construction from runoff over unpaved parking areas or from impervious surfaces. Impacts due to sediment transport would be long-term, negligible to minor, and adverse. Impacts are mitigatable during construction, sediment release can be controlled through proper placement and maintenance of silt fencing, or other appropriate devices. Long-term adverse impacts due to sediment releases may be mitigated by using appropriately sized stormwater retention/detention structures. The structures would be designed to release runoff water via infiltration or evapotranspiration, avoiding direct runoff, sedimentation, and pollutant transport to Fox Creek and its tributaries.

Construction-related noise could disturb bald eagles using areas near the construction sites for foraging or roosting (there are no documented nest sites in the preserve at or near the construction sites). Noise impacts would be short term (lasting only until construction is completed) and negligible.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

The preferred alternative would result in construction of the maintenance facility and associated parking areas. No riparian gallery forest is planned for removal. Riparian vegetation would not be directly disturbed by the preferred alternative. There would be no fill placement in or dredging of wetlands or other waters of the United States.

Indirect impacts to threatened and endangered species may include sediment releases from the construction site as described for the visitor center and parking areas. These impacts would be short term, negligible to minor, and adverse. During construction for the maintenance facility, sediment release could be controlled as described for the visitor center. This can be accomplished through proper placement and maintenance of silt fencing or other appropriate barriers, and placement of appropriately sized stormwater retention/detention structures. The structures would be designed to release runoff water via infiltration or evapotranspiration, avoiding direct runoff, sedimentation, and pollutant transport to Fox Creek and its tributaries or to the Cottonwood River.

Construction-related noise could disturb bald eagles using areas near the construction sites for foraging or roosting (there are no documented nest sites in the preserve at or near the construction sites). Noise impacts would be short term (lasting only until construction is completed) and negligible.

Cumulative Impacts. Past and present actions that have affected native plant communities of the preserve include conversion of the tallgrass prairie within the Southeastern Great Plains Tallgrass Prairie Ecological System to agriculture, nonnative hayfields, farmsteads, ranch and feed lot operation centers and corrals, urban areas, and infrastructure. These conversions of land-use changes in local water practices, have altered the physical and biological characteristics of streams. The Topeka shiner is sensitive to permanent changes in habitat such as reduced water quality and increased water temperature. It is also sensitive to intensive, continuous grazing, which tends to reduce and trample streamside vegetation and increase the amount of silt and sediment in streams (Platts 1979). High fecal coliform counts in Fox and Palmer creeks reduce water quality and may result from runoff from heavily grazed hayfields (Department of Health and Environment Kansas Water Quality Assessment 1996 in NPS 2000a).

Most recently, tallgrass prairie within the preserve was disturbed by installation of a new waterline to provide potable water to the preserve. Future actions in and near the preserve include highway construction and maintenance, trail construction and maintenance, watershed and stock pond development, stream alterations, de-watering, land management, and introduction of nonnative species that could impact endangered species or their riparian habitats. Cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, minor to moderate, and adverse. The addition to the Flint Hills ranching legacy area aspect of the preferred alternative would not contribute adverse impacts to the cumulative impact scenario because there would be no impacts to threatened and endangered species. Construction of the new facilities at the visitor center and administrative and maintenance sites would adversely contribute to cumulative impacts. However, with appropriate mitigation measures, this contribution would be negligible.

Conclusion. There would be no direct effects to threatened or endangered species from the implementation of the preferred alternative at the preserve. There could be short- and long-term, negligible to minor, adverse impacts from sediment release as an indirect effect of the preferred alternative. These impacts could be readily avoided, minimized, and/or mitigated through use of best management practices for control of sediments and careful siting of stormwater retention/detention structures. Past, present, and reasonably foreseeable future actions would result in long-term, minor to moderate, adverse impacts. With appropriate mitigation measures, the preferred alternative would not contribute negligibly to the cumulative impact scenario.

Wildlife

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to the Flint Hills ranching legacy area would not directly affect wildlife habitat. Redesignation would preclude future major construction in this area, and any future direct and indirect impacts. The redesignation would remove 68.0 acres from potential future construction. This redesignation would result in a long-term, negligible to minor, beneficial impact to wildlife.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

Construction associated with the preferred alternative would have short-term, site-specific, negligible, adverse impacts to wildlife habitat. The habitat of the preferred alternative site is comprised of a mix of nonnative and native vegetation. This alternative would result in site-specific, localized, short-term, negligible to minor, adverse, and long-term, site-specific, negligible, adverse impacts to wildlife species and habitat.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

The area proposed to support construction of the maintenance area is disturbed with nonnative vegetation as wildlife habitat. Construction of the maintenance facility would result in localized, short-term, negligible, adverse impacts to wildlife during construction, and localized, long-term, negligible, adverse effects due to the maintenance facility replacing habitat.

Cumulative Impacts. Past and present actions that have affected wildlife include conversion of native prairie to agricultural lands and urban development outside the preserve. Reasonably foreseeable future actions that could affect wildlife include future expansion of St. Anthony Cemetery and additional loss of tallgrass prairie habitat near the preserve. Cumulative impacts to wildlife from past, present, and reasonably foreseeable actions in and near the preserve would be long-term, adverse, and moderate to major as a result of the loss of tallgrass prairie habitat on a continental scale. The preferred alternative would result in a long-term, negligible,

adverse impact on wildlife where construction is proposed, and long-term, negligible to minor, beneficial impact on wildlife with the addition of acreage in the Flint Hill ranching legacy area.

Conclusion. Impacts to wildlife associated with this alternative from construction of new facilities would be short and long-term, negligible to minor, and adverse. Cumulative impacts to wildlife from conversion to agriculture and urban development would be long-term, moderate to major, and adverse. The preferred alternative would contribute negligibly to cumulative impacts.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of wildlife would be unlikely.

Visitor Experience/Appreciation

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to Flint Hills ranching legacy area would not directly affect visitor use and experience. Redesignation would exclude future major construction in this area, and therefore keep the Bottomland Trail secluded and natural. This would result in a long-term, negligible, beneficial impact.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

Under the preferred alternative, a visitor center and other new visitor facilities would be constructed within 1,000 feet of the historic Spring Hill / Z Bar Ranch Headquarters. Visitor information and orientation services, the amphitheater, gift and book sales, and offices would be moved from the ranch house complex to the new visitor center. This would reduce the frequent distracting activity in the ranch house, make additional ranch house rooms available for display of historic furnishings and interpretation, and improve the historic setting.

The new visitor center would be wheelchair accessible, so removable ramps would not be needed for disabled visitors seeking information and orientation services. (Accessibility accommodations would still be required at the ranch house.) The visitor center would include space for interpretive displays, providing improved communication of interpretive themes and educational information to visitors. Outdoor options for visitors (picnicking, outdoor amphitheater) would be associated with the visitor center, if space allows. The preferred alternative site would provide excellent access to backcountry trails.

The preferred alternative would provide improved orientation, information, interpretive services, and recreational opportunities, resulting in long-term moderate beneficial impacts to

visitor experience. The new visitor center would be the staging area for the public shuttle system, thereby providing an enhanced connection to the prairie tours. Overall, effects to visitor experience would be long-term, moderate, and beneficial.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

Visitor vehicles and buses would no longer be parked at the ranch complex. Moreover, stored NPS vehicles, equipment, and materials would be moved to the new maintenance facility. These actions would enhance the historic ambiance of the ranch environment, and would result in a long-term, negligible to minor, beneficial impact on visitor experience.

Cumulative Impacts. The Bottomland Trail opened for use in 2003, expanding the range of visitor opportunities available at the preserve. The preserve recently implemented a living history program at the historic Spring Hill / Z Bar Ranch Headquarters. An outdoor symphony concert was held in the summer of 2006. Other visitor opportunities would be added in future years, as envisioned by the GMP. Combined with these additional visitor opportunities, impacts would be long-term, beneficial, and moderate. The contribution of the visitor center and administrative site aspect of the preferred alternative to cumulative impacts would be moderate. The contribution of the maintenance site aspect of the preferred alternative to cumulative impacts would be negligible to minor. The addition to the Flint Hills ranching legacy area would make a negligible contribution to cumulative impacts.

Conclusion. The impact of the preferred alternative to visitor experience would be long-term, moderate, and beneficial. Cumulative impacts would also be long-term, moderate, and beneficial, and the contribution of the preferred alternative would be moderate and beneficial.

Scenic Quality

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to the Flint Hills ranching legacy area would not directly affect scenic resources. Redesignation would exclude future major construction in this area. This area is visually impaired by the highway, traffic, and urban development. The redesignation, therefore, would result in a long-term, negligible, beneficial impact to scenic resources.

Proposed Visitor Center / Administrative Parcel and Visitor Information and Orientation Area

The visitor center and administrative facilities parcel would be located within 1,000 feet (less than 0.2 mile) from the historic Spring Hill / Z Bar Ranch Headquarters, and would be visible from most vantage points at the ranch headquarters. With thoughtful design, however, the visual impact of the facilities could be minimized. The parcel slopes south (away from the ranch headquarters) and buildings could be designed in low profile (built into slope, one story).

The parcel and subsequent facilities would be visible from the Flint Hills ranching legacy and day use areas. However, looking toward the site, visitors would also see the ranch headquarters and other development and alterations. These same characteristics would help make the facilities inconspicuous from the high ridges within the preserve, east of Fox Creek. Again, with thoughtful design, the visual impact of the facilities could be minimized. This parcel and facilities would be visible along SH 177 within 0.5 mile of the site. This parcel and facilities would also be visible from the bottomland area and the bluffs to the east, and elevated prairie to the west. This location is not visible from the west or east beyond 1.0 mile or from the north and south beyond 0.5 mile (appendix F).

The views from the site and facilities looking west would be of the prairie for approximately 0.5 mile before the topography obstructs the viewshed. Views to the south would also be of the prairie and a bluff with a silo approximately 2.0 miles away. Views to the north would be of the ranch headquarters, and views to the east are comprised of the bottomland prairie and bluffs.

Considering most vantage points, impacts to scenic quality from constructing new facilities on the preferred alternative site would be long-term, adverse, and moderate within the immediate vicinity of the parcel (see mitigation measures for design criteria and appendix F for viewshed analysis).

Proposed Maintenance Parcel and Visitor Information and Orientation Area

The maintenance facilities would be located adjacent to and east of the Strong City sewage lagoons along CR 277. This parcel is screened by forests on three sides. The day use management area to the north and east is elevated from the bottomlands and views of the maintenance area would be minimal.

Considering most vantage points, impacts to scenic quality from constructing new maintenance facilities on this parcel would be long-term, adverse, and negligible.

Cumulative Impacts. Past impacts on scenic quality in and around the preserve have resulted primarily from introduction of nonrural land uses and development. Foreseeable future actions could include development on adjacent private land, encouraged by the increased presence of preserve visitors. Assuming that NPS facilities are designed to take advantage of superior views while shielding inferior views, overall cumulative impacts would be long-term, minor, and adverse. The visitor center and administrative site aspect of the preferred alternative would contribute to cumulative impacts on scenic quality, and this contribution would be long-term, minor to moderate, and adverse. The maintenance site and addition to the Flint Hills ranching legacy area aspects of the preferred alternative would not contribute to cumulative impacts because their impacts to scenic quality were both negligible.

Conclusion. Impacts to scenic quality from developing facilities on the preferred alternative sites would be long-term, moderate, and adverse with thoughtful siting and design for the visitor center, and long-term, negligible, and adverse for the maintenance facility. The preferred alternative would make a long-term, minor to moderate, adverse contribution to cumulative impacts.

Impairment. Because there would be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the preserve's establishing legislation, (2) key to the natural or cultural integrity of the preserve or to opportunities for enjoyment of the preserve, or (3) identified as a goal in the preserve's GMP or other relevant NPS planning documents, impairment of scenic quality would be unlikely.

Water Quality

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to the Flint Hills ranching legacy area would not directly affect water quality. Redesignation would exclude future major construction in the area, resulting in a long-term, negligible, beneficial impact to water quality.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

Under the preferred alternative, new preserve facilities would be constructed. With implementation of a stormwater pollution prevention plan, construction-related impacts to water quality (soil disturbance, sedimentation, and increased stormwater runoff) would be temporary, minor, and adverse. The stormwater prevention plan would outline measures to slow, reduce, and/or contain stormwater runoff, sedimentation, and release of contaminants. Following construction of the new facilities, the area of impervious surfaces (parking lots, roofs, sidewalks, etc.) would be greater, reducing infiltration to surface and subsurface soils, thus increasing stormwater runoff. Small quantities of contaminants such as oil and antifreeze from visitor center parking areas would be absorbed into or transported by stormwater runoff and washed into a retention/detention structure (see mitigation section). Water quality impacts are expected to be short- and long-term, minor, and adverse.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

A new maintenance facility would be constructed near the Strong City sewage lagoons as part of the preferred alternative. With implementation of a stormwater pollution prevention plan, construction-related impacts to water quality (soil disturbance, sedimentation, and increased stormwater runoff) would be temporary, negligible, and adverse. The stormwater prevention plan would outline measures to slow, reduce, and/or contain stormwater runoff, sedimentation, and release of contaminants. Following construction of the new facilities, the area of impervious surfaces (parking lots, roofs, sidewalks, etc.) would be greater, reducing infiltration to subsurface soils and thus increasing stormwater runoff. Small quantities of contaminants such as oil and antifreeze from maintenance and visitor parking areas, would be absorbed into or transported by stormwater runoff and washed into a retention/detention structure. Water quality impacts are expected to be long-term, negligible to minor, and adverse. Impacts to water quality from construction on the proposed maintenance facility parcel would be short- and long-term, negligible, and adverse.

Cumulative Impacts. Regional urban, suburban, and rural development with associated increased stormwater runoff, sedimentation, and introduction of contaminants into streams and rivers has occurred. Future actions in and near the preserve include highway construction and maintenance, trail construction and maintenance, watershed and stock pond development, stream alternations, de-watering, land management, farming, ranching and feed lot operations, and slight expansion of St. Anthony Cemetery. Cumulative impacts on water quality would be long-term, minor to moderate, and adverse, depending on the rate of suburban and rural expansion.

The visitor center, administrative, and maintenance site plans of the preferred alternative would contribute to cumulative impacts on water quality that would be negligible to minor because mitigation measures would be implemented to reduce or prevent sedimentation and runoff into water courses. The addition to the Flint Hills ranching legacy area would not contribute to cumulative impacts since the impacts to water quality are negligible.

Conclusion. Impacts to water quality from the preferred alternative would be long-term, negligible to minor, and adverse. Cumulative impacts would be long-term, minor to moderate, and adverse. The preferred alternative's contribution to cumulative water quality impacts would be long-term, negligible to minor, and adverse.

Floodplains

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to the Flint Hills ranching legacy area would exclude future major construction in this area, resulting in no impacts to floodplains.

Proposed Visitor Center / Administration Parcel and Visitor Information and Orientation Area

The proposed visitor information and administration center parcel is not located within the floodplain; however, it is adjacent to the 100-year floodplain of an intermittent tributary of Fox Creek. All buildings would be located outside the 100-year floodplain. A qualified hydrologist would conduct a site visit to delineate the 100-year floodplain. Delineation would ensure that individual facilities are placed and protected according to NPS floodplain guidelines during the design phase. Because construction would be outside the floodplain, there would be no impacts.

Proposed Maintenance Parcel and Visitor Information and Orientation Area

A portion of the parcel proposed for the maintenance facility is located within the 100-year floodplain of Fox Creek. Prior to planning and design of the new facilities, a qualified hydrologist would delineate the 100- and 500-year floodplains to ensure that construction occurs outside of floodplains. Hazardous materials storage areas and storage/display of

curatorial items are class II actions and are required to be located outside of the 500-year floodplain or protected from the 500-year flood. Therefore, there would be no impacts to floodplains from the preferred alternative.

Cumulative Impacts. Regional urban, suburban, and rural development, with associated increased stormwater runoff and sedimentation, has occurred. Future actions near the preserve could include additional infrastructure, urban, and rural construction. Overall cumulative impacts from past, present, and reasonably foreseeable actions would be long-term, minor to moderate, and adverse. The preferred alternative would not contribute to cumulative impacts.

Conclusion. The preferred alternative would not result in impacts to floodplains, nor would it contribute to cumulative impacts.

Preserve Operations

Proposed Flint Hills Ranching Legacy Area Revision

Modifying the designation of this parcel from visitor information and orientation management area to the Flint Hills ranching legacy area would not change current management of the area, and therefore would have no impact on preserve operations.

Proposed Visitor Center / Administration Parcel, Maintenance Parcel and Visitor Information and Orientation Area

NPS operations would be consolidated at the new visitor information and administrative center and maintenance facilities. Daily management would improve due to the proximity of the new visitor center to the historic Spring Hill / Z Bar Ranch Headquarters, and the preserve's core natural and cultural resources. Facilities would be new, and the best available and affordable design and technologies would be incorporated. The new facilities and equipment would be secure. Impacts to preserve operations would be long-term, minor to moderate, and beneficial.

Cumulative Impacts. As operations at this relatively new national park unit continue to expand, management responsibilities for preserve staff will increase. The overall cumulative impact would be long-term, minor to moderate, and adverse, without adequate facilities. The visitor center and administrative site, and maintenance site aspects of the preferred alternative would contribute long-term, minor to moderate, and beneficial cumulative impacts. The addition to the Flint Hills ranching legacy area would not contribute to cumulative impacts because there were no impacts to preserve operations.

Conclusion. Impacts to preserve operations would be long-term, beneficial, and minor to moderate. Cumulative impacts would be long-term, minor to moderate, and adverse. The contribution of the preferred alternative to cumulative impacts would be long-term, minor to moderate, and beneficial.

CONSULTATION AND COORDINATION

AGENCIES, ORGANIZATIONS, AND TRIBES

Agencies and organizations contacted for information; or that assisted with identifying or clarifying important issues, developing alternatives, or analyzing impacts; or that will be provided copies of this GMP revision include:

Federal Agencies

- U.S. Department of Agriculture – Natural Resources Conservation Service
- U.S. Department of the Interior – U.S. Fish and Wildlife Service

State Agencies

- Kansas Department of Agriculture – Division of Water Resources
- Kansas Department of Commerce and Housing – Travel and Tourism Development Division
- Kansas Department of Health and Environment – Division of Environment
- Kansas Department of Transportation
- Kansas Department of Wildlife and Parks Environmental Services Section
- Kansas State Historical Society – State Historic Preservation Office

Regional and Local Agencies

- Chase County Board of County Commissioners
- Mayor, City of Cottonwood Falls
- Mayor, City of Strong City

Culturally Affiliated American Indian Tribes

- Kaw Tribe
- Osage Tribe
- Pawnee Tribe
- Wichita Tribe

Other

- Audubon of Kansas
- Kansas Farm Bureau
- Kansas Livestock Association
- Kansas Park Trust
- National Park Trust
- Sierra Club, Kansas Chapter
- Tallgrass Prairie National Preserve Advisory Committee
- The Nature Conservancy, Kansas Chapter

REFERENCES

- Andrew, J. M. and J. A. Mosher
1982 "Bald Eagle Nest Site Selection and Nesting Habitat in Maryland." *Wildlife Management*. 46:382-390.
- Bahr Vermeer & Haecker, Architects in association with John Milner Associates, Inc., Land and Community Associates, and Quinn Evans Architects
2004 Tallgrass Prairie National Preserve, Cultural Landscape Report.
- BRW
1999 *Tallgrass Prairie National Preserve Transportation Analysis*. Copy available at Tallgrass Prairie National Preserve.
- Buehler, D. A. et al.
1991 Nonbreeding bald eagle communal and solitary roosting behavior and roost habitat on the northern Chesapeake Bay. *J. Wildlife Management* 55:273-281.
- Buehler, D. A., S. K. Chandler, T. J. Mersmann, J. D. Fraser, and J. K. D. Seegar
1992 Nonbreeding Bald Eagle Perch Habitat on the Northern Chesapeake Bay. *Wilson Bulletin* 104:540-545.
- Bulger, A. G., and D. R. Edds
2001 "Population Structure and Habitat Use in Neosho Madtom (*Noturus placidus*)." *Southwestern Naturalist* 46:8-15.
- Campbell, R. W., N. K. Dawe, I. McTaggart-Cowan, J. M. Cooper, G. W. Kaiser, and M. C. McNall
1990 *The birds of British Columbia*. Volume 2. Nonpasserines: diurnal birds of prey through woodpeckers. University of British Columbia Press, Vancouver, B.C. 636 pp
- Cross, F. B.
1967 *Handbook of Fishes of Kansas*. University of Kansas Museum of Natural History Miscellaneous Publication No. 45. 357 pp.
- Cross, F. B., and J. T. Collins
1995 *Fishes in Kansas*. Second Edition, revised. University of Kansas Museum of Natural History. xvii + 315 pp.
- Ehrlich, P. R., D. S. Dobkin, and D. Wheye
1988 *The Birder's Handbook: A Field Guide to the Natural History of North American Birds*. Simon and Schuster. New York, NY.

REFERENCES

- Jones, Bruce A.
1999 *Archeological Overview and Assessment for Tallgrass Prairie National Preserve, Chase County, Kansas*. Midwest Archeological Center Technical Report No. 6. Lincoln, NE. Copy available at Tallgrass Prairie National Preserve.
- Jones, Bruce A.
2002 "Trip Report, Travel to Tallgrass Prairie National Preserve, Kansas, August 5–8, 2002." Copy available at Midwest Archeological Center, Lincoln. NE.
- Jones, Bruce A.
2004 Memo dated January 14, 2004. Archeological inventory of proposed visitor center location alternatives, Tallgrass Prairie National Preserve, Chase County, Kansas. Copy available at Tallgrass Prairie National Preserve.
- Jones, Bruce A.
2005 Memorandum Regarding Travel to Tallgrass Prairie National Preserve, November 7–10, 2005.
- Kansas Department of Health and Environment
1996 Kansas Water Quality Assessment (305(b) Report).
- Kerns, H. A.
1982 *Notropis topeka* in Kansas: Distribution, Habitat, Life History. Unpublished manuscript, University of Kansas.
- Lauver, Chris L., Stephen L. Egbert, and Clayton F. Blodgett
1999 Vegetation Mapping and Digital Database Development for Tallgrass Prairie National Preserve. Rpt. No. 93. Kansas Biol. Surv., Lawrence, KS.
- Miller, Steve
2007 National Park Service. Statistics provided regarding Tallgrass Prairie National Preserve visitation.
- Minckley, W. L., and F. B. Cross
1959 "Distribution, habitat and abundance of the Topeka shiner, *Notropis Topeka*" (Gilbert), in *Kansas. American Midland Naturalist*. 6:210-7.
- National Park Service (NPS), Department of the Interior
1994 *Guiding Principles of Sustainable Design*. Copy available at NPS Denver Service Center.
- 1997 Director's Order – 28: *Cultural Resource Management Guideline*. Copy available at Tallgrass Prairie National Preserve.
- 2000a *General Management Plan / Environmental Impact Statement*, Tallgrass Prairie National Preserve, Kansas. Copy available at Tallgrass Prairie National Preserve.

- 2000b Director's Order – 47: *Sound Preservation and Noise Management*. Copy available at Tallgrass Prairie National Preserve.
- 2002 Director's Order – 77-1: *Wetland Protection*. Copy available at Tallgrass Prairie National Preserve.
- 2003a Director's Order – 77-2: *Floodplain Management*. Copy available at Tallgrass Prairie National Preserve.
- 2003b Gary Smilie, National Park Service Hydrologist, to Robert King, Facility Manager, Tallgrass Prairie National Preserve, February 21, 2003, personal e-mail. Copy available at Tallgrass Prairie National Preserve.
- 2003c *Interim Technical Guidance on Assessing Impacts and Impairment to Natural Resources*. Copy available at Tallgrass Prairie National Preserve.
- 2004a Memorandum from Steve Miller, TAPR superintendent to Jayne Aaron, e²M project manager, February 2, 2004, regarding archeology inventory of proposed TAPR visitor center location alternatives.
- 2004b *Tallgrass Prairie National Preserve Plant List*. NPS Species – The National Park Service Biodiversity Database. Secure online version. <https://science1.nature.nps.gov/npspecies/>. Accessed February 23, 2004.
- 2004c *Tallgrass Prairie National Preserve Bird List*. NPS Species – The National Park Service Biodiversity Database. Secure online version. <https://science1.nature.nps.gov/npspecies/>. Accessed February 23, 2004.
- 2005 *Management Policies*. Copy available at Tallgrass Prairie National Preserve.
- NatureServe Explorer
- 2006 Comprehensive Report on the Topeka Shiner (*Notropis topeka*). <http://www.natureserve.org/explorer>.
- Phillips, G. L., W. D. Schmid and J. C. Underhill
- 1982 *Fishes of the Minnesota Region*. University of Minnesota Press, Minneapolis, MN. 248 pp.
- Platts, W. S.
- 1979 Livestock grazing and riparian/stream ecosystems -an overview. Pp. 39-45 in O. B. Cope (ed.). *Proceedings, Forum on grazing and riparian/stream ecosystems*. Trout Unlimited, Inc., Vienna, VA.
- RBA Group
- 1999 *Tallgrass Prairie National Preserve Site Investigation Report*, National Park Trust, January 1999.

REFERENCES

Samson, Fred B. and Fritz L. Knopf

1994 Prairie Conservation in North America. *Bioscience* 44(6).

Schwilling, M.

1981 "Kansas Nongame and Endangered Wildlife." *The Kansas School Naturalist*, Vol. 27. No. 3., Emporia State University. 15 pp.

Spencer, Gay

2006 Personal communication with Ms. Spencer of the NRCS office in Cottonwood Falls, Kansas regarding designated prime farmland within Tallgrass Prairie National Preserve. June 13, 2007.

The Nature Conservancy (TNC)

2007a TNC mission information found at www.nature.org. Website accessed 6/13/07.

2007b TNC role in cooperative management at Tallgrass Prairie National Preserve information found at www.nature.org/wherewework/northamerica/states/kansas/preserves/art15403.html.

Tabor, Vernon

1993 Status Report on Topeka Shiner (*Notropis Topeka*). U.S. Fish and Wildlife Service, Manhattan, KS. 22 pp.

U.S. Department of Agriculture (USDA), Soil Conservation Service

1974 Soil Survey of Chase County, KS.

U.S. Fish and Wildlife Service (USFWS)

2006 County Threatened and Endangered Species Occurrence – Chase County, Kansas. <http://mountain-prairie.fws.gov/endspp/CountyLists/KANSAS.htm>.

Wenke, T. L., M.E. Eberle, G. W. Ernsting, and W. J. Stark

1992 "Winter Collections of the Neosho Madtom (*Noturus placidus*)."
Southwestern Naturalist 37:330-3.

Wolfenbarger, Deon K.

1996 "Spring Hill Ranch National Historic Landmark Nomination," Omaha: National Park Service, Midwest Regional Office.

PREPARERS AND CONSULTANTS

National Park Service, Tallgrass Prairie National Preserve

Stephen T. Miller, Superintendent
Kristen Hase, Chief of Natural Resource Management
Paula Andersen, Former Chief of Natural Resource Management
Heather Brown, Chief of Interpretation and Visitor Services
Tobin Roop, Facility Manager
Robert King, Former Facility Manager
Brock Davis, Administrative Officer
Anne-Marie Rizzi, Former Administrative Officer

National Park Service, Midwest Region

Sandra Washington, Chief of Planning and Compliance
Sue Jennings, Environmental Compliance Specialist
Marla McEnaney, Landscape Architect
Al O'Bright, Architect

National Park Trust

Louise Carlin, Former Project Director
Paul Duffendack, Chairman

Kansas Park Trust

Louise Carlin, Executive Director

The Nature Conservancy

Brian Obermeyer, Director, Flint Hills Initiative
Alan Pollom, Kansas State Director

engineering-environmental Management, Inc. (e²M)

Miki Stuebe, Landscape Architect/Planner
Jayne Aaron, Environmental Planner/Historic Architect
Chris Baker, Historian
Wanda Gray Lafferty, Technical Publications Specialist
Arne Buechling, Natural Resource Specialist
Travis Belote, Natural Resource Specialist
Schelle Frye, NEPA Specialist

APPENDIX A
AGENCY CORRESPONDENCE



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kansas Field Office
2609 Anderson Avenue
Manhattan, Kansas 66502-6172

April 12, 2006

4/14/06 ①
APR 14 2006

MEMORANDUM

64411-2006-P-0221

TO: Superintendent, National Park Service, Tallgrass Prairie National Preserve Office
Attn: Natural Resources Program Manager

FROM: Field Supervisor, Fish and Wildlife Service, Kansas Field Office *Michael J. LeVelly*

SUBJECT: Site Development Plan and Environmental Assessment

This is in response to your March 15, 2006 letter regarding your preparation of a site development plan and environmental assessment for future facilities at the Tallgrass Prairie National Preserve, Chase County, Kansas. The current action alternative being considered would locate the visitor information and orientation center near a tributary to Fox Creek which is known to be occupied by the endangered Topeka shiner. It is anticipated that development will be close but not occur directly in the stream itself.

By avoiding construction impacts within the stream channel, there should be no opportunity for directly impacting the Topeka shiner or its aquatic habitat. The remaining question is whether the project may indirectly affect habitat. The Park Service should assess its proposal and determine whether the construction process itself or the operation and maintenance of the facility could impact habitat quality in this stream. Factors such as surface runoff and riparian corridor maintenance should be evaluated. If it is determined that any phase of the proposed activity may adversely affect habitat to the detriment of the species, formal consultation pursuant to section 7 of the Endangered Species Act may be required. If you determine, and this office concurs, that there will be no adverse effect, there will be no need for further consultation.

Please contact Dan Mulhern of this office if you have further questions or require more information regarding the section 7 process. Thank you for this opportunity to review the proposal and provide these comments.

cc: KDWP, Pratt, KS (Environmental Services)

March 15, 2006

D18 (TAPR)
xL7615
xN1619

Michael J. LeValley
U.S. Fish and Wildlife Service
315 Houston Street, Suite E
Manhattan, Kansas 66502

Dear Mr. LeValley:

Tallgrass Prairie National Preserve has restarted the process of preparing a site development plan and environmental assessment for future facilities. We informed Mr. William Gill of the initial start of this process in a letter, copy enclosed, dated October 28, 2003. Mr. Gill's response, dated November 12, 2003, is also enclosed.


We consulted with your office during the development of the general management plan (GMP) including our preparation of a related biological assessment (BA). The BA is enclosed for your reference.

The current action alternative being considered for future facilities would require amending the preserve's GMP to move the visitor information and orientation area. The new proposed location for the visitor center and administration facility is south of the historic ranch headquarters along the west side of Kansas State Highway 177 (NE/4 Sec. 6 T19S R8E). The new proposed location for the maintenance facilities is east of the Strong City Sewage Lagoons (NE/4 Sec. 17 T19S R8E). A map is enclosed showing the original location and the two new proposed locations.

The primary habitat includes go-back prairie and brome fields. Most of the area was previously disturbed by agricultural and ranch facilities development. The visitor center/administration area includes Topeka shiner habitat (tributary to Fox Creek). Topeka shiners have been collected by National Park Service and Kansas Department of Wildlife and Parks staff upstream. It is anticipated that development will be close but not occur directly in the stream area, however, the Topeka shiner habitat is within the proposed development area. The maintenance area does not include Topeka shiner habitat.

We appreciate the opportunity to work together for the benefit of the preserve's resources. Please contact our Natural Resources Program Manager, Kristen Hase, regarding any necessary actions under Section 7 of the Endangered Species Act of 1973, as amended.

Sincerely,


Stephen T. Miller
Superintendent

Enclosures (3)

Appendix B

NOV-21-2003 15:23

TALLGRASS PRAIRIE NPRES

P.19/26

NOV 17 2003

11/17/03

copy provided to Park



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Kansas Field Office
315 Houston Street, Suite E
Manhattan, Kansas 66502-6172

November 12, 2003

Stephen T. Miller
Superintendent
National Park Service
Tallgrass Prairie National Preserve
P.O. Box 585, 226 Broadway
Cottonwood Falls, Kansas 66845

Dear Mr. Miller:

This is in response to your October 28, 2003 letter announcing the Park Service's process of preparing a site development plan and environmental assessment for future facilities development. Plans include a visitor information and orientation area with visitor and administrative facilities. Our principle interests in this development are the protection of federal trust resources, including threatened and endangered species, migratory birds, and wetlands.

As you are already aware, the endangered Topoka shiner (*Notropis topeka*) has been confirmed as occurring in streams on the Preserve. Two unnamed right bank tributaries to Fox Creek are known to contain this endangered fish, as is an unnamed left bank direct tributary to the Cottonwood River. Impacts to these areas, including increased runoff or significant alterations to the watershed areas, should be avoided if at all possible. You have already indicated in your General Management Plan a desire to minimize impacts on the prairie resource for which the Preserve was dedicated, which will help minimize impacts on grassland nesting birds, some of which are experiencing sharp population declines in recent years. In this predominantly prairie setting, wetlands are generally associated with streams and artificial impoundments. However, a more site-specific assessment should be conducted prior to final selection of a particular site for development. If wetland habitats may be impacted, a permit may be required from the U.S. Army Corps of Engineers.

If you have any further questions regarding any of these comments, please contact this office again. Thank you for providing us this opportunity for coordination.

Sincerely,

William H. Gill
Field Supervisor

United States Department of Agriculture



Natural Resources Conservation Service
3020 W. 18th, Suite B
Emporia, Kansas 66801-6191

Phone: 620-343-7276
FAX: 620-343-7871
www.ks.nrcs.usda.gov

SEP 27 2006

9/27/06

(2c)

September 26, 2006

Stephen Miller, Superintendent
Tallgrass Prairie National Preserve Office
P.O. Box 585
Cottonwood Falls, Kansas 66845-0585

Dear Mr. Miller:

Thank you for completing Part VI and VII of the AD-1006 Farmland Conversion Impact Rating form for a visitor center and administration facilities along the west side of Highway 177 (E2 Sec. 6 T19S R8E). This project is located in Chase County.

Enclosed is a copy of the completed Farmland Conversion Impact Rating (AD-1006) form for you to keep.

I see no other adverse environmental effects for which the Natural Resources Conservation Service is responsible for evaluating.

I wish you well with your project and if our local NRCS office in Cottonwood Falls can be of any assistance, don't hesitate to call.

Sincerely,

A handwritten signature in cursive script, reading 'William M. Gilliam'.

WILLIAM M. GILLIAM
Assistant State Conservationist

Attachment

cc w/o attachment:

Gay L. Spencer, District Conservationist, NRCS, Emporia, Kansas
Lynn E. Thurlow, Soil Conservationist, NRCS, Salina, Kansas

Helping People Help the Land

An Equal Opportunity Provider and Employer

SEP 27 2006

U.S. Department of Agriculture					
FARMLAND CONVERSION IMPACT RATING					
PART I (To be completed by Federal Agency)			Date Of Land Evaluation Request <u>08/03/2006</u>		
Name of Project <u>General Management Plan Revision</u>			Federal Agency Involved <u>DOI Nat'l Park Service</u>		
Proposed Land Use <u>Visitor Center / Admin Facilities</u>			County and State <u>Chase County, KS</u>		
PART II (To be completed by NRCS)			Date Request Received By NRCS <u>8/7/06</u> Person Completing Form: <u>S. Hightower</u>		
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)			YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Acres Irrigated <u>368</u>	Average Farm Size <u>1,391</u>
Major Crop(s) <u>Soybeans</u>	Farmable Land in Govt. Jurisdiction Acres: <u>354,753</u> % <u>71</u>	Amount of Farmland As Defined in FPPA Acres: <u>129,455</u> % <u>26</u>			
Name of Land Evaluation System Used <u>IESA</u>	Name of State or Local Site Assessment System <u>-</u>	Date Land Evaluation Returned by NRCS <u>8/10/06</u>			
PART III (To be completed by Federal Agency)			Alternative Site Rating		
			Site A	Site B	Site C
A. Total Acres To Be Converted Directly			<u>4.5</u>		
B. Total Acres To Be Converted Indirectly			<u>1.5</u>		
C. Total Acres In Site			<u>6.0</u>		
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland			<u>4.7</u>		
B. Total Acres Statewide Important or Local Important Farmland			<u>354,753</u>		
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted			<u>71</u>		
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value			<u>71</u>		
PART V (To be completed by NRCS) Land Evaluation Criterion					
Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)			<u>50</u>		
PART VI (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)			Maximum Points	Site A	Site B
1. Area In Non-urban Use			(15)	<u>15</u>	
2. Perimeter In Non-urban Use			(10)	<u>10</u>	
3. Percent Of Site Being Farmed			(20)	<u>0</u>	
4. Protection Provided By State and Local Government			(20)	<u>20</u>	
5. Distance From Urban Built-up Area			(15)	<u>15</u>	
6. Distance To Urban Support Services			(15)	<u>0</u>	
7. Size Of Present Farm Unit Compared To Average			(10)	<u>0</u>	
8. Creation Of Non-farmable Farmland			(10)	<u>0</u>	
9. Availability Of Farm Support Services			(5)	<u>3</u>	
10. On-Farm Investments			(20)	<u>0</u>	
11. Effects Of Conversion On Farm Support Services			(10)	<u>0</u>	
12. Compatibility With Existing Agricultural Use			(10)	<u>5</u>	
TOTAL SITE ASSESSMENT POINTS			160	<u>68</u>	
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)			100	<u>50</u>	
Total Site Assessment (From Part VI above or local site assessment)			160	<u>68</u>	
TOTAL POINTS (Total of above 2 lines)			260	<u>118</u>	
Site Selected: <u>A</u>		Date Of Selection <u>8/16/06</u>		Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
Reason For Selection: <u>Visitor Center / Admin Facilities</u>					
Name of Federal agency representative completing this form: <u>Kristen Hase</u>				Date: <u>08/03/2006</u>	
(See Instructions on reverse side)				Form AD-1006 (03-02)	

United States Department of Agriculture



Natural Resources Conservation Service
3020 W. 18th, Suite B
Emporia, Kansas 66801-6191

Phone: 620-343-7276
FAX: 620-343-7871
www.ks.nrcs.usda.gov

September 26, 2006

Stephen Miller, Superintendent
Tallgrass Prairie National Preserve Office
P.O. Box 585
Cottonwood Falls, Kansas 66845-0585

Dear Mr. Miller:

Thank you for completing Part VI and VII of the AD-1006 Farmland Conversion Impact Rating form for a maintenance facility along the east side of the Strong City sewage lagoons. This project is located in Chase County.

Enclosed is a copy of the completed Farmland Conversion Impact Rating (AD-1006) form for you to keep.

I see no other adverse environmental effects for which the Natural Resources Conservation Service is responsible for evaluating.

I wish you well with your project and if our local NRCS office in Cottonwood Falls can be of any assistance, don't hesitate to call.

Sincerely,

A handwritten signature in cursive script, reading "William M. Gilliam".

WILLIAM M. GILLIAM
Assistant State Conservationist

Attachment

cc w/o attachment:
Gay L. Spencer, District Conservationist, NRCS, Emporia, Kansas
Lynn E. Thurlow, Soil Conservationist, NRCS, Salina, Kansas

Helping People Help the Land

An Equal Opportunity Provider and Employer

SEP 27 2006

U.S. Department of Agriculture					
FARMLAND CONVERSION IMPACT RATING					
PART I (To be completed by Federal Agency)			Date Of Land Evaluation Request <u>07/31/2006</u>		
Name of Project <u>General Management Plan Revision</u>			Federal Agency Involved <u>DOI Natl Park Service</u>		
Proposed Land Use <u>Maintenance Facilities</u>			County and State <u>Chase County, KS</u>		
PART II (To be completed by NRCS)			Date Request Received By NRCS <u>8/17/06</u>		
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)			YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Person Completing Form: <u>S. Hightower</u>
Major Crop(s) <u>Soybeans</u>			Farmable Land In Govt. Jurisdiction Acres: <u>354,750</u> % <u>71</u>		Acres Irrigated <u>368</u> Average Farm Size <u>1,391</u>
Name of Land Evaluation System Used <u>LESA</u>			Name of State or Local Site Assessment System <u>-</u>		Amount of Farmland As Defined in FPPA Acres: <u>129,455</u> % <u>26</u>
					Date Land Evaluation Returned by NRCS <u>8/2/2006</u>
PART III (To be completed by Federal Agency)			Alternative Site Rating		
A. Total Acres To Be Converted Directly			Site A	Site B	Site C
B. Total Acres To Be Converted Indirectly			2.8		
C. Total Acres In Site			2.7		
			5.5		
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland			4.9		
B. Total Acres Statewide Important or Local Important Farmland			-		
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted			21		
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value			71		
PART V (To be completed by NRCS) Land Evaluation Criterion					
Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)			77		
PART VI (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)			Maximum Points	Site A	Site B
1. Area In Non-urban Use			(15)	13	
2. Perimeter In Non-urban Use			(10)	3	
3. Percent Of Site Being Farmed			(20)	20	
4. Protection Provided By State and Local Government			(20)	20	
5. Distance From Urban Built-up Area			(15)	15	
6. Distance To Urban Support Services			(15)	0	
7. Size Of Present Farm Unit Compared To Average			(10)	0	
8. Creation Of Non-farmable Farmland			(10)	0	
9. Availability Of Farm Support Services			(5)	3	
10. On-Farm Investments			(20)	10	
11. Effects Of Conversion On Farm Support Services			(10)	0	
12. Compatibility With Existing Agricultural Use			(10)	5	
TOTAL SITE ASSESSMENT POINTS			160	89	
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)			100	77	
Total Site Assessment (From Part VI above or local site assessment)			160	89	
TOTAL POINTS (Total of above 2 lines)			260	166	
Site Selected: <u>A</u>		Date Of Selection <u>8/16/06</u>		Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
Reason For Selection: <u>Maintenance Facilities</u>					
Name of Federal agency representative completing this form: <u>Kristen Hase</u>					Date:

(See Instructions on reverse side)

Form AD-1006 (03-02)

August 14, 2006

D18 (TAPR)
xL7615
xN1619

Sheldon Hightower
NRCS Area Office
3020 W. 18th Avenue, Suite B
Emporia, Kansas 66801

Dear Mr. Hightower:

Thank you for your assistance with Prime and Unique Farmland compliance regarding the new proposed visitor center/administration facilities and maintenance facilities at Tallgrass Prairie National Preserve. I have completed Part VI of the Farmland Conversion Impact Rating forms (Form AD-1006) and am enclosing the forms for your review. I am also enclosing a map of the two facilities locations.

Please contact Natural Resources Program Manager Kristen Hase with comments or questions about the forms or about necessary actions that may be required to proceed further into this process. Thank you for your time.

Sincerely,

Sgt. Kristen

Stephen T. Miller
Superintendent

Enclosures 3

bcc:
Supt
CNR
/central files
chron file
reading file

STMiller:kjh; 8/14/2006

U.S. Department of Agriculture					
FARMLAND CONVERSION IMPACT RATING					
PART I (To be completed by Federal Agency)			Date Of Land Evaluation Request <u>07/31/2006</u>		
Name of Project <u>General Management Plan Revision</u>			Federal Agency Involved <u>DOI Natl Park Service</u>		
Proposed Land Use <u>Maintenance Facilities</u>			County and State <u>Chase County, KS</u>		
PART II (To be completed by NRCS)			Date Request Received, By NRCS <u>8/1/06</u> Person Completing Form: <u>S. Hightower</u>		
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)			YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Acres Irrigated <u>368</u>	Average Farm Size <u>1,391</u>
Major Crop(s) <u>Soybeans</u>	Farmable Land In Govt. Jurisdiction Acres: <u>354,73%</u> <u>71</u>		Amount of Farmland As Defined in FPPA Acres: <u>129,455%</u> <u>26</u>		
Name of Land Evaluation System Used <u>LESA</u>	Name of State or Local Site Assessment System <u>-</u>		Date Land Evaluation Returned by NRCS <u>8/2/2006</u>		
PART III (To be completed by Federal Agency)			Alternative Site Rating		
A. Total Acres To Be Converted Directly			Site A	Site B	Site C
B. Total Acres To Be Converted Indirectly			2.8		
C. Total Acres In Site			2.7		
			5.5		
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland			4.9		
B. Total Acres Statewide Important or Local Important Farmland			-		
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted			21		
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value			71		
PART V (To be completed by NRCS) Land Evaluation Criterion					
Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)			77		
PART VI (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)			Maximum Points	Site A	Site B
1. Area In Non-urban Use			(15)	13	
2. Perimeter In Non-urban Use			(10)	3	
3. Percent Of Site Being Farmed			(20)	20	
4. Protection Provided By State and Local Government			(20)	20	
5. Distance From Urban Built-up Area			(15)	15	
6. Distance To Urban Support Services			(15)	0	
7. Size Of Present Farm Unit Compared To Average			(10)	0	
8. Creation Of Non-farmable Farmland			(10)	0	
9. Availability Of Farm Support Services			(5)	3	
10. On-Farm Investments			(20)	10	
11. Effects Of Conversion On Farm Support Services			(10)	0	
12. Compatibility With Existing Agricultural Use			(10)	5	
TOTAL SITE ASSESSMENT POINTS			160	89	
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)			100	77	
Total Site Assessment (From Part VI above or local site assessment)			160	89	
TOTAL POINTS (Total of above 2 lines)			260	166	
Site Selected:		Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>		
Reason For Selection:					
Name of Federal agency representative completing this form: <u>Kristen Hase</u> Date:					

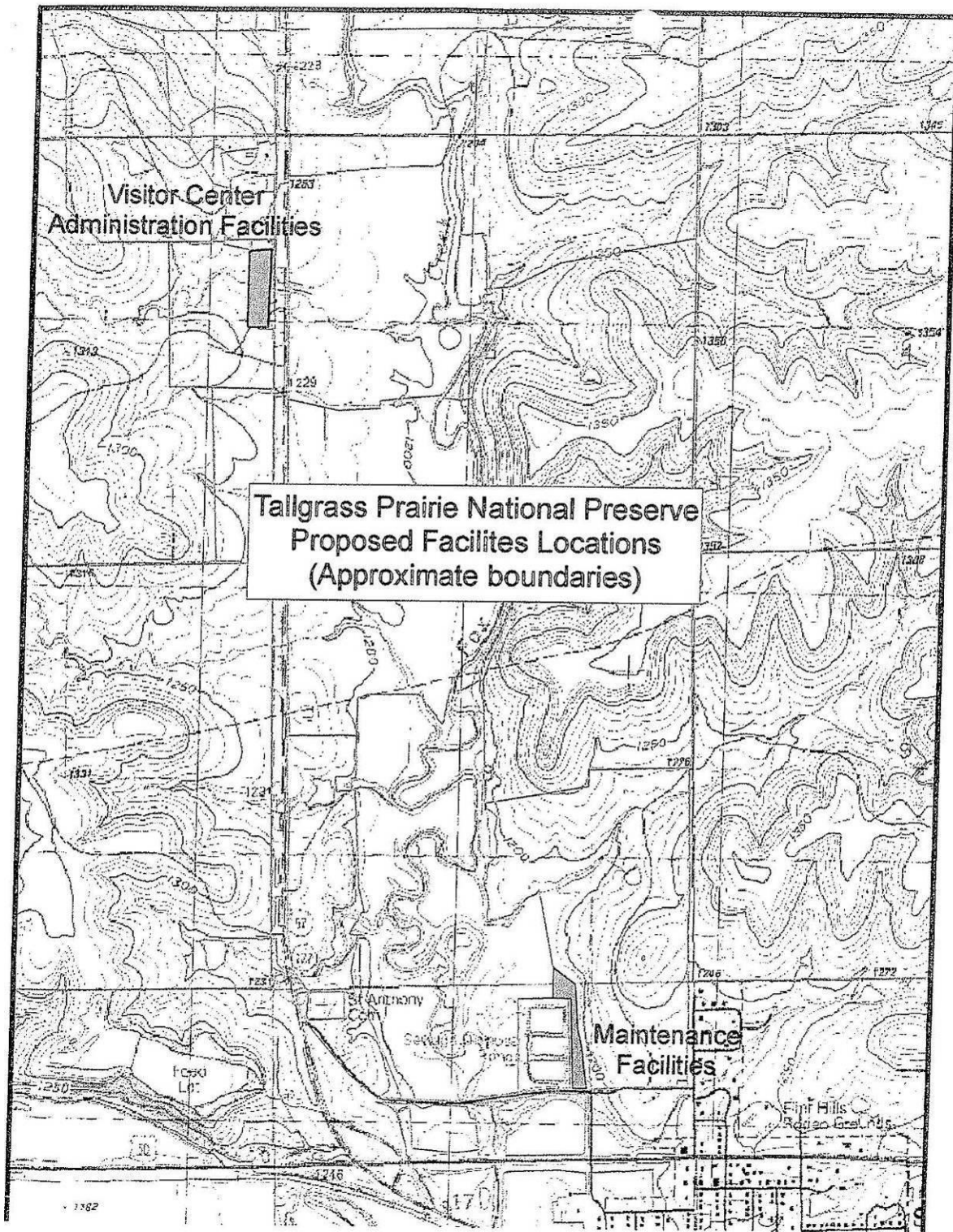
(See Instructions on reverse side)

Form AD-1006 (03-02)

U.S. Department of Agriculture					
FARMLAND CONVERSION IMPACT RATING					
PART I (To be completed by Federal Agency)			Date Of Land Evaluation Request <u>08/03/2006</u>		
Name of Project <u>General Management Plan Revision</u>			Federal Agency Involved <u>DOI Nat'l Park Service</u>		
Proposed Land Use <u>Visitor Center / Admin Facilities</u>			County and State <u>Chase County, KS</u>		
PART II (To be completed by NRCS)			Date Request Received By NRCS <u>8/7/06</u> Person Completing Form: <u>S. Hightower</u>		
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)			YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	Acres Irrigated <u>368</u>	Average Farm Size <u>1,391</u>
Major Crop(s) <u>Soybeans</u>	Farmable Land In Govt. Jurisdiction Acres: <u>354,753</u> % <u>71</u>	Amount of Farmland As Defined in FPPA Acres: <u>129,455</u> % <u>26</u>			
Name of Land Evaluation System Used <u>LESA</u>	Name of State or Local Site Assessment System <u>-</u>	Date Land Evaluation Returned by NRCS <u>8/10/06</u>			
PART III (To be completed by Federal Agency)			Alternative Site Rating		
A. Total Acres To Be Converted Directly			Site A	Site B	Site C
B. Total Acres To Be Converted Indirectly			4.5		
C. Total Acres In Site			1.5		
			6.0		
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland			4.7		
B. Total Acres Statewide Important or Local Important Farmland			354,753		
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted			4		
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value			71		
PART V (To be completed by NRCS) Land Evaluation Criterion			50		
Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)					
PART VI (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-105)			Maximum Points	Site A	Site B
1. Area In Non-urban Use			(15)	15	
2. Perimeter In Non-urban Use			(10)	10	
3. Percent Of Site Being Farmed			(20)	0	
4. Protection Provided By State and Local Government			(20)	20	
5. Distance From Urban Built-up Area			(15)	15	
6. Distance To Urban Support Services			(15)	0	
7. Size Of Present Farm Unit Compared To Average			(10)	0	
8. Creation Of Non-farmable Farmland			(10)	0	
9. Availability Of Farm Support Services			(5)	3	
10. On-Farm Investments			(20)	0	
11. Effects Of Conversion On Farm Support Services			(10)	0	
12. Compatibility With Existing Agricultural Use			(10)	5	
TOTAL SITE ASSESSMENT POINTS			160	68	
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)			100	50	
Total Site Assessment (From Part VI above or local site assessment)			160	68	
TOTAL POINTS (Total of above 2 lines)			260	118	
Site Selected:		Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>		
Reason For Selection:					
Name of Federal agency representative completing this form: <u>Kristen Hase</u> Date: <u>08/03/2006</u>					

(See Instructions on reverse side)

Form AD-1006 (03-02)



August 3, 2006

D18 (TAPR)
xL7615
xN1619

Sheldon Hightower
NRCS Area Office
3020 W. 18th Avenue, Suite B
Emporia, Kansas 66801

Dear Mr. Hightower:

Tallgrass Prairie National Preserve has restarted the process of preparing a site development plan and environmental assessment for future facilities.

The current action alternative being considered for future facilities would require amending the preserve's general management plan to move the visitor center and administration facilities. The new proposed location for these facilities is south of the historic ranch house and barn and on the west side of Highway 177 (E/2 Sec. 6 T19S R8E). A map is enclosed showing the new proposed location.

Historically, the area was farmed but it is currently a "go back" native or mixed native and nonnative prairie. Soils for the area include: Martin, Ivan, and Smolan. It is likely that these soils will be directly or indirectly affected by building the proposed facilities on this site. Final plans for the facilities have not been determined, so the extent of the impacts to these soil resources is unknown at this time. A Farmland Conversion Impact Rating Form (Form AD-1006) is enclosed for your review.

We appreciate the opportunity to work together for the benefit of the preserve's resources. Please contact Natural Resources Program Manager Kristen Hase regarding necessary actions that may be required to proceed further into this process.

Sincerely,

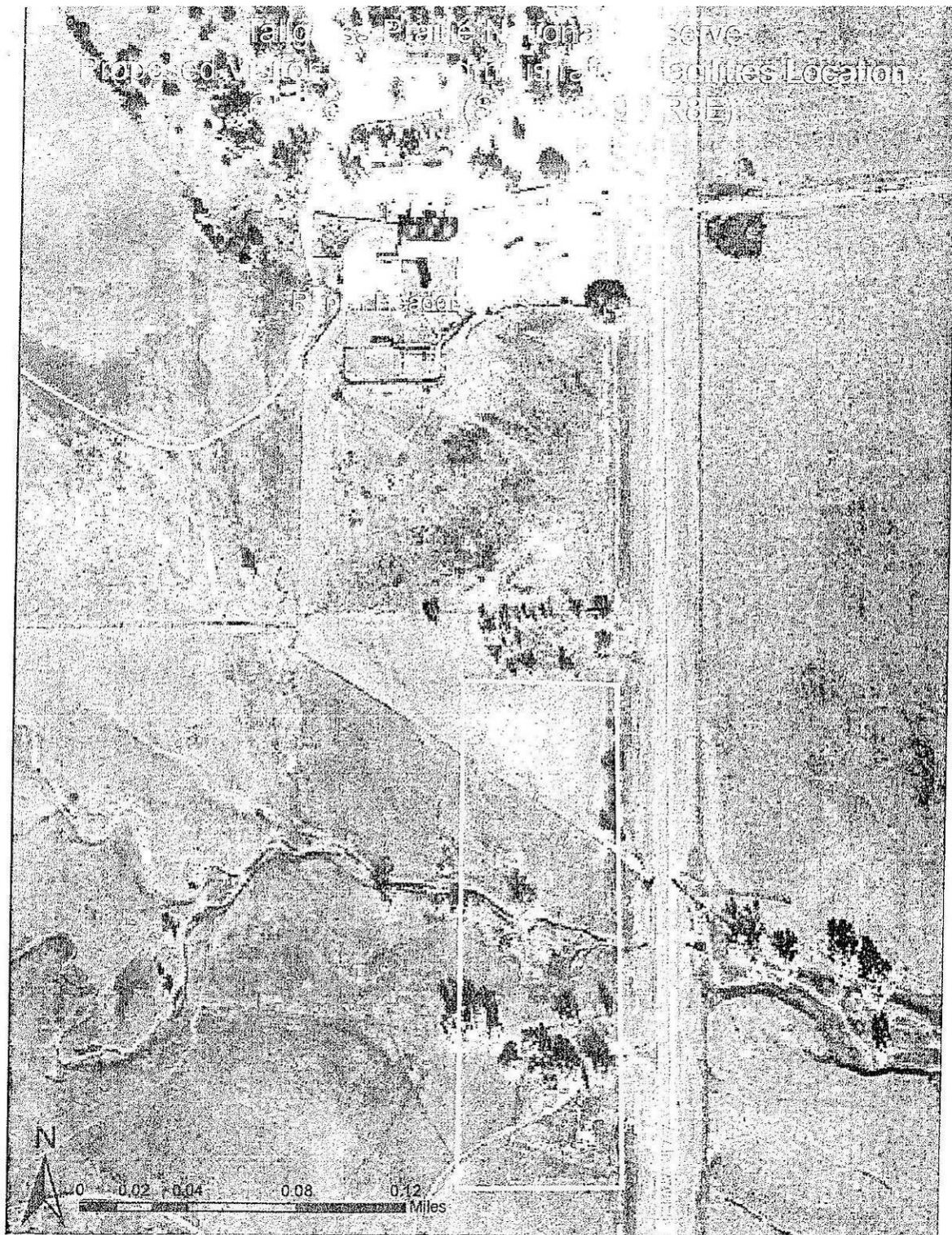


Stephen T. Miller
Superintendent

Enclosures 2

bcc:
Supt
CNR
central files
chron file
reading file

STMILLER:kjh; 8/4/2006



U.S. Department of Agriculture							
FARMLAND CONVERSION IMPACT RATING							
PART I (To be completed by Federal Agency)				Date Of Land Evaluation Request <u>08/03/2006</u>			
Name of Project <u>General Management Plan Revision</u>				Federal Agency Involved <u>DOI Nat'l Park Service</u>			
Proposed Land Use <u>Visitor Center / Admin Facilities</u>				County and State <u>Chase County, KS</u>			
PART II (To be completed by NRCS)				Date Request Received By NRCS		Person Completing Form:	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)				YES <input type="checkbox"/> NO <input type="checkbox"/>		Acres Irrigated	
Major Crop(s)				Farmable Land In Govt. Jurisdiction Acres: %		Amount of Farmland As Defined in FPPA Acres: %	
Name of Land Evaluation System Used				Name of State or Local Site Assessment System		Date Land Evaluation Returned by NRCS	
PART III (To be completed by Federal Agency)				Alternative Site Rating			
				Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly				4.5			
B. Total Acres To Be Converted Indirectly				1.5			
C. Total Acres In Site				6.0			
PART IV (To be completed by NRCS) Land Evaluation Information							
A. Total Acres Prime And Unique Farmland							
B. Total Acres Statewide Important or Local Important Farmland							
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted							
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value							
PART V (To be completed by NRCS) Land Evaluation Criterion							
Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)							
PART VI (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)				Maximum Points	Site A	Site B	Site C
1. Area In Non-urban Use				(15)			
2. Perimeter In Non-urban Use				(10)			
3. Percent Of Site Being Farmed				(20)			
4. Protection Provided By State and Local Government				(20)			
5. Distance From Urban Built-up Area				(15)			
6. Distance To Urban Support Services				(15)			
7. Size Of Present Farm Unit Compared To Average				(10)			
8. Creation Of Non-farmable Farmland				(10)			
9. Availability Of Farm Support Services				(5)			
10. On-Farm Investments				(20)			
11. Effects Of Conversion On Farm Support Services				(10)			
12. Compatibility With Existing Agricultural Use				(10)			
TOTAL SITE ASSESSMENT POINTS				160			
PART VII (To be completed by Federal Agency)							
Relative Value Of Farmland (From Part V)				100			
Total Site Assessment (From Part VI above or local site assessment)				160			
TOTAL POINTS (Total of above 2 lines)				260			
Site Selected:				Date Of Selection		Was A Local Site Assessment Used?	
						YES <input type="checkbox"/> NO <input type="checkbox"/>	
Reason For Selection:							
Name of Federal agency representative completing this form: <u>Kristen Hase</u>						Date: <u>08/03/2006</u>	
(See Instructions on reverse side)						Form AD-1006 (03-02)	

July 31, 2006

D18 (TAPR)
xL7615
xN1619

Sheldon Hightower
NRCS Area Office
3020 W. 18th Avenue, Suite B
Emporia, Kansas 66801

Dear Mr. Hightower:

Tallgrass Prairie National Preserve has restarted the process of preparing a site development plan and environmental assessment for future facilities.

The current action alternative being considered for future facilities would require amending the preserve's general management plan to move the maintenance facilities. The new proposed location for the maintenance facilities is east of the Strong City sewage lagoons (NE/4 Sec. 17 T19S R8E). A map is enclosed showing the new proposed location.

The area currently is managed as a brome hay field. The area has an old storage barn and is bordered by the Strong City sewage lagoons. Soils for the area include: Reading, Martin, and Clime-Sogn complex. It is likely that these soils will be directly or indirectly affected by building the proposed maintenance facilities on this site. Final plans for the facilities have not been determined, so the extent of the impacts to these soil resources is unknown at this time. A Farmland Conversion Impact Rating Form (Form AD-1006) is enclosed for your review.

We appreciate the opportunity to work together for the benefit of the preserve's resources. Please contact Natural Resources Program Manager Kristen Hase regarding necessary actions that may be required to proceed further into this process.

Sincerely,



Stephen T. Miller
Superintendent

Enclosures 2

bcc:
Supt
CNR

central files
~~chron~~ file
reading file

U.S. Department of Agriculture					
FARMLAND CONVERSION IMPACT RATING					
PART I (To be completed by Federal Agency)			Date Of Land Evaluation Request <u>07/31/2006</u>		
Name of Project <u>General Management Plan Revision</u>			Federal Agency Involved <u>DOI Natl Park Service</u>		
Proposed Land Use <u>Maintenance Facilities</u>			County and State <u>Chase County, KS</u>		
PART II (To be completed by NRCS)			Date Request Received By NRCS		Person Completing Form:
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)			YES <input type="checkbox"/>	NO <input type="checkbox"/>	
Major Crop(s)		Farmable Land In Govt. Jurisdiction Acres: %	Acres Irrigated		Average Farm Size
Name of Land Evaluation System Used		Name of State or Local Site Assessment System	Amount of Farmland As Defined in FPPA Acres: %		
			Date Land Evaluation Returned by NRCS		
PART III (To be completed by Federal Agency)			Alternative Site Rating		
			Site A	Site B	Site C
A. Total Acres To Be Converted Directly			2.8		
B. Total Acres To Be Converted Indirectly			2.7		
C. Total Acres In Site			5.5		
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide Important or Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)					
PART VI (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)			Maximum Points	Site A	Site B
1. Area In Non-urban Use			(15)		
2. Perimeter In Non-urban Use			(10)		
3. Percent Of Site Being Farmed			(20)		
4. Protection Provided By State and Local Government			(20)		
5. Distance From Urban Built-up Area			(15)		
6. Distance To Urban Support Services			(15)		
7. Size Of Present Farm Unit Compared To Average			(10)		
8. Creation Of Non-farmable Farmland			(10)		
9. Availability Of Farm Support Services			(5)		
10. On-Farm Investments			(20)		
11. Effects Of Conversion On Farm Support Services			(10)		
12. Compatibility With Existing Agricultural Use			(10)		
TOTAL SITE ASSESSMENT POINTS			160		
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)			100		
Total Site Assessment (From Part VI above or local site assessment)			160		
TOTAL POINTS (Total of above 2 lines)			260		
Site Selected:		Date Of Selection	Was A Local Site Assessment Used?		
			YES <input type="checkbox"/> NO <input type="checkbox"/>		
Reason For Selection:					
Name of Federal agency representative completing this form: <u>Kristen Hase</u>					Date:
(See Instructions on reverse side)					Form AD-1006 (03-02)



SEP - 5 2006
5

AGENCY REVIEW TRANSMITTAL FORM

Comments by: KDHETransmittal Date: September 1, 2006

This form provides notification and the opportunity for your agency to review and comments on this proposed project as required by Executive Order 12372. Review Agency, please complete Parts II and III as appropriate and return to contact person listed below. Your prompt response will be appreciated.

RETURN TO: Mr. Stephen Miller
United States Department of the Interior, National Park Service
Tallgrass Prairie National Preserve Office
P.O. Box 585, 266 Broadway
Cottonwood Falls, KS 66845-0585

PART I REVIEW AGENCIES/COMMISSION

<input type="checkbox"/> Aging	<input type="checkbox"/> Education	<input type="checkbox"/> State Forester
<input type="checkbox"/> Agriculture	<input type="checkbox"/> Geological Survey, KS	<input type="checkbox"/> Transportation
<input type="checkbox"/> Biological Survey	<input checked="" type="checkbox"/> Health & Environment	<input type="checkbox"/> Water Office, KS
<input type="checkbox"/> Conservation Commission	<input type="checkbox"/> Historical Society	<input type="checkbox"/> Wildlife & Parks
<input type="checkbox"/> Corporation Commission	<input type="checkbox"/> Social & Rehabilitation	<input type="checkbox"/> Commerce

PART II AGENCY REVIEW COMMENTS

COMMENTS: (Attach additional sheet if necessary) Re: New location proposed visitor center and administrative facilities, Strong City, KS
Please see the enclosed comments submitted by Dawit Teclehaimanot, Bureau of Environmental Remediation.

PART III RECOMMENDED ACTION COMMENTS

<input checked="" type="checkbox"/> Clearance of the project should be granted.	<input type="checkbox"/> Clearance of the project should not be delayed but the Applicant should (in the final application) address and clarify the question or concerns indicated above.
<input type="checkbox"/> Clearance of the project should not be granted.	
<input type="checkbox"/> Clearance of the project should be delayed until the issues or questions above have been clarified.	<input type="checkbox"/> Request the opportunity to review final application prior to submission to the federal funding agency.
<input type="checkbox"/> Request a State Process Recommendation in concurrence with the above comments.	

DIVISIONS/ AGENCY/ COMMISSION

Reviewer's Name: Ronald F. Hammerschmidt Date: September 1, 2006

Organization: Kansas Department of Health & Environment
Ronald F. Hammerschmidt, Ph.D.
Director, Division of Environment
Curtis State Office Building
1000 SW Jackson St., Suite 400
Topeka, KS 66612-1367

RFH:df
enclosure

SEP - 3 2006



KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
KATHLEEN SEBELIUS, GOVERNOR
Roderick L. Bremby, Secretary

MEMORANDUM

TO: Donna Fisher

CC: Bob Jurgens → File: Strong City Dump, Chase CO (009-STR)

FROM: Dawit Tecle

DATE: August 23, 2006

RE: Environmental Audit Requested by USDI National Park Service for a new proposed location for maintenance facility east of the Strong City Sewage Lagoons.

The Kansas Department of Health and Environment (KDHE), Bureau of Environmental Remediation (BER), Assessment and Restoration Section, Landfill / Drycleaner Remediation Unit has one known closed city dump site in the vicinity of the proposed project site. The Strong City dump site is located in the NW ¼, SE ¼, NE ¼, Sec 17, T19S, R8E (see attached map).

Staff from USDI national park service, are welcome to come view the KDHE-BER files in accordance with the Kansas Open Records Act. If you have any questions, please contact me at (785) 296-6377 or at dtecle@kdhe.state.ks.us.

DIVISION OF ENVIRONMENT
Bureau of Environmental Remediation

1000 SW Jackson, Suite 410
(785) 296-6377

Topeka, KS 66612-1367
FAX (785) 296-4823

strong City Dump Site



August 16, 2006

D18 (TAPR)
xA7615
xL7615

Ronald Hammerschmidt, Ph.D.
Director, Division of Environment
Kansas Department of Health and Environment
Curtis State Office Building
1000 SW Jackson Street, Suite 400
Topeka, Kansas 66612-1367

Dear Mr. Hammerschmidt:

Tallgrass Prairie National Preserve has restarted the process of preparing a site alternatives study and environmental assessment for future facilities. We informed you of the initial start of this process in a letter dated October 28, 2003. Your office's response, in November 2003, is enclosed.

The current action alternative being considered for future facilities would require amending the preserve's general management plan to move the visitor information and orientation area. The new proposed location for the visitor center and administration facilities is south of the historic ranch headquarters along the west side of Kansas State Highway 177 (NE/4 Sec. 6 T19S R8E). The new proposed location for the maintenance facility is east of the Strong City Sewage Lagoons (NE/4 Sec. 17 T19S R8E). A map is enclosed showing the original location and the two new proposed locations.

Most of the area was previously disturbed by agricultural and ranch facilities development, and includes go-back prairie and brome fields. Surface water resources include an unnamed tributary to Fox Creek. It is anticipated that development will be close but not occur directly in the stream area.

We would appreciate any additional input your office may have regarding health and environmental issues in the proposed areas. Please contact our Natural Resources Program Manager, Kristen Hase, at 620-273-6034 if you have any questions or need additional information.

Sincerely,



Stephen T. Miller
Superintendent

Enclosures 2

bcc:
CNR
/central files
chron files
reading file

STMiller:mem:8/16/2006

11/18/03
 copy forwarded to Bep.
 0002 2 1 AGN

AGENCY REVIEW TRANSMITTAL FORM

Comments by _____

Transmittal Date _____

This form provides notification and the opportunity for your agency to review and comments on this proposed project as required by Executive Order 12372. Review Agency, please complete Parts II and III as appropriate and return to contact person listed below. Your prompt response will be appreciated.

RETURN TO: Mr. Stephen T. Miller, Superintendent
 United States Department of the Interior, National Park Service
 Tallgrass Prairie National Preserve Office
 P.O. Box 585, 226 Broadway
 Cottonwood Falls, KS 66845-0585

PART I REVIEW AGENCIES/COMMISSION		
<input type="checkbox"/> Aging	<input type="checkbox"/> Education	<input type="checkbox"/> State Forester
<input type="checkbox"/> Agriculture-DWR	<input type="checkbox"/> Geological Survey, KS	<input type="checkbox"/> Transportation
<input type="checkbox"/> Biological Survey, KS	<input checked="" type="checkbox"/> Health & Environment	<input type="checkbox"/> Water Office, KS
<input type="checkbox"/> Conservation Commission	<input type="checkbox"/> Historical Society	<input type="checkbox"/> Wildlife & Parks
<input type="checkbox"/> Corporation Commission	<input type="checkbox"/> Social & Rehabilitation	
<input type="checkbox"/> Commerce		

PART II AGENCY REVIEW COMMENTS
COMMENTS: (Attach additional sheet if necessary) **RE:** Visitor Information facilities, Strong City, KS
 Please see the enclosed LUST report from Ms. Kristie Ohlmeier, BER and Mr. Michael McNulty, BER has files for the Strong City Dump, currently a burnsite. If you have any questions, please contact him at (785) 296-1938 for further information. Please see the enclosed comments from Mr. Don Carlson, Bureau of Water.

PART III RECOMMENDED ACTION COMMENTS	
<input checked="" type="checkbox"/> Clearance of the project should be granted.	<input type="checkbox"/> Clearance of the project should not be delayed but the Applicant should (in the final application) address and clarify the question or concerns indicated above.
<input type="checkbox"/> Clearance of the project should not be granted.	
<input type="checkbox"/> Clearance of the project should be delayed until the issues or questions above have been clarified.	<input type="checkbox"/> Request the opportunity to review final application prior to submission to the federal funding agency.
<input type="checkbox"/> Request a State Process Recommendation in concurrence with the above comments.	

DIVISIONS/ AGENCY/ COMMISSION

Reviewer's Name: Ronald H. Ammons, Jr. Date: November 17, 2003
 Organization: Kansas Department of Health & Environment
 Director, Division of Environment
 Curtis State Office Building
 1000 SW Jackson St., Suite 400
 Topeka, KS 66612-1367



K A N S A S

RODERICK L. BREMBY, SECRETARY

DEPARTMENT OF HEALTH AND ENVIRONMENT

KATHLEEN SEBELIUS, GOVERNOR

The following list of Leaking Underground Storage Tank projects are printed from the Agency's database of Underground and Aboveground storage tank facilities that have been assessed. The information contained in this printout is for informational purposes only and does not necessarily represent the current condition of the property.

If the receiver of this information would like to view specific documents in these files, please contact Kristie Ohlemeier at (785) 296-1678 or provide a written request by mail or fax at (785) 296-6190.

DIVISION OF ENVIRONMENT

Bureau of Environmental Remediation

CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE 410, TOPEKA, KS 66612-1367

Phone 785-296-1678

Fax 785-296-6190

<http://www.kdhe.state.ks.us/ber/index.html>

Printed on Recycled Paper

Storage Tank Facility / Owner

Page 1 of 1

Facility Number: 41382 AboveGround Tanks: 1-Active 0 -Inactive Under Ground Tanks: 0-Active 0-Inactive	
Compliance Comments:	Stop Permit from Printing? Temporary Expires Date:
Name: KANSAS DEPT OF TRANSPORTATION Contact Name -- Title: F. Glenn Phinney -- Phone: 316-382-3717	
Signed Date: 11/19/93	
Address: US 50/K-177, MIXSTRIP 2311 City:STRONG CITY State:KS ZipCode:66869	
Physical Address:Us 50/k-177, Mixstrip 2311 City:Strong City State:Ks ZipCode:66869	
County -- District: Chase -- SC Legal Description: of of of Sec: Tws: Rng:	
Location Method:GARMIN 3 PLUS Location Feature:Facility Center Latitude:38.40159416 Longitude:-96.55467519	
Datum:WGS84	
Inspection Date: Inspection Type: Inspector:	
Observed Releases:	
Inventory Control Compliance: Deficiencies:	
Full 1998 Compliance: Deficiencies:	
Full Leak Detection Compliance: Deficiencies:	
2003 UST Due: \$0 Paid: Date: L.Fee:	2004 UST Due: \$0 Paid: Date:
2003 AST Due: \$10 Paid:\$10 Date: 01/03/2003 L.Fee:	2004 AST Due: \$10 Paid: Date:

Owner(23227)(TRANSPORTATION, DEPARTMENT OF)(ROOM 881 DOCKING ST OFFICE BLDG TOPEKA KS 66612)(Phone:785-296-3661)

Type	Tank#	Status	Permit	Exempt	YR-Inst	Substance	Capacity	Fill-Rmv-Compl
A	001	Cur In Use	06/02/2003	No	1952	Other(LIQ-ASPHALT MIX)	8,000	

<http://henotes3/BERRREGT/BERRREG.nsf/8fb4869c370a9f0386256990006b3f10/385326b3e7...> 11/4/03



K A N S A S

RODERICK L. BREMBY, SECRETARY

DEPARTMENT OF HEALTH AND ENVIRONMENT

KATHLEEN SEBELIUS, GOVERNOR

MEMORANDUM

DATE: November 4, 2003

TO: Donna Fisher, Receptionist - DOE Director's Office

FROM: Donald Carlson - BOW

SUBJECT: Agency Review Comments
Tallgrass Prairie National Preserve - Cottonwood Falls

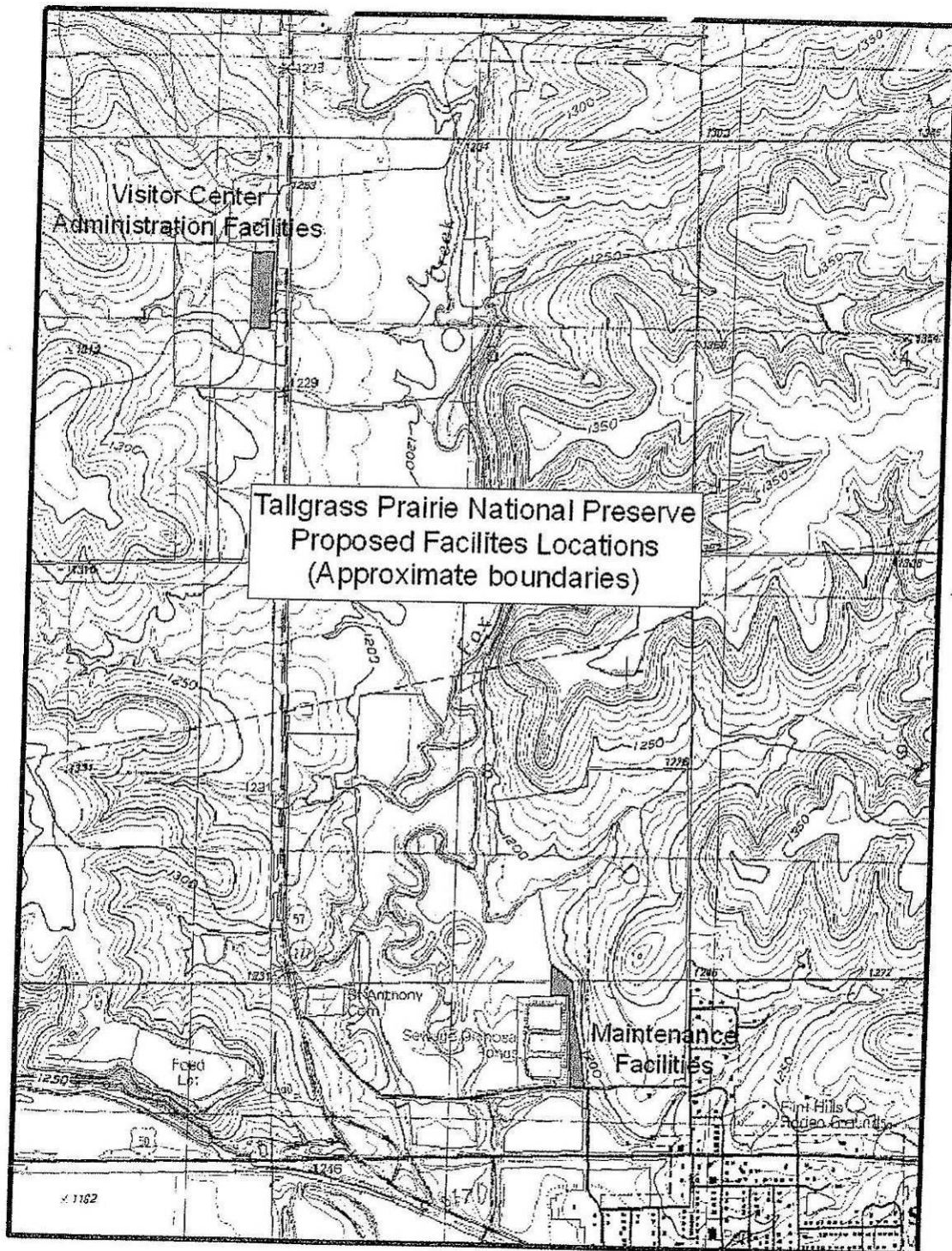
I offer the following comments for review and consideration:

- As of January 9, 2003, the owner or operator (the party responsible for the project) of any construction activity which disturbs 1 acre or more is required to file a National Pollutant Discharge Elimination System (NPDES) permit application for stormwater runoff resulting from construction activities. The project owner (the party responsible for the project) must obtain authorization from KDHE to discharge stormwater runoff associated with construction activities prior to commencing construction. The Kansas construction stormwater general permit, a Notice of Intent (application form), a frequently asked questions file and supplemental materials are on-line on the KDHE Stormwater Program webpage at www.kdhe.state.ks.us/stormwater. Any additional questions or further information regarding construction stormwater permitting requirements should be directed to Alan Brooks at (785) 296-5549.
- Wastewater generated by the facility which is not directed to a City sanitary sewer may require the issuance of a State Water Pollution Control Permit. To obtain information regarding the need for a permit or to obtain the appropriate application forms, please contact Donald Carlson at (785) 296-5547 or Joe Mester at (785) 296-6804.
- If you will utilize a private water well to supply drinking water for the proposed facility, and the facility will serve 25 people or more per day, you need to contact Dave Waldo

DIVISION OF ENVIRONMENT
Bureau of Water - Industrial Programs Section
CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE 420, TOPEKA, KS 66612-1367
Voice 785-296-5545 Fax 785-296-0086 <http://www.kdhe.state.ks.us>

regarding any potential State or Federal public water supply laws or requirements that may pertain to the proposed operation. If you should have any questions regarding drinking water regulations, please contact Mr. Dave Waldo at (785) 296-5503.

- If a water well will be utilized as a water source, it should be noted that the construction shall be done by individuals licensed by the KDHE Bureau of Water. For information regarding the licensing of water well contractors can be obtained by contacting Mr. Richard Harper or Mr. Don Taylor at (785) 296-3565 and (785) 296-5522 respectively.



AUG 11 2006 *8/11/06*



United States Department of Agriculture
Natural Resources Conservation Service
3020 W. 18th Avenue, Suite B
Emporia, Kansas 66801-5140

"A Partner in Conservation Since 1935"

Phone: 620-343-7276
FAX: 620-343-7871
www.ks.nrcs.usda.gov

August 10, 2006

Stephen Miller, Superintendent
Tallgrass Prairie National Preserve Office
P.O. Box 585
Cottonwood Falls, Kansas 66845-0585

Dear Mr. Miller,

Thank you for the opportunity to review the proposed project for a visitor center and administration facilities along the west side of Highway 177 (E2 Sec. 6 T19S R8E). This project is located in Chase County.

Since the proposed project is on land physically located outside the defined city limits and that the proposed project may convert farmland, as defined in the Farmland Protection Policy Act to nonagricultural uses, this project is affected by the Farmland Protection Policy Act and therefore, an AD-1006 form is required. I have completed Parts II, IV and V of the AD-1006 form and I am returning this form back to you to complete Parts VI and VII of this form.

Enclosed is the Site Assessment Criteria information for completing Part VI. The AD-1006 form will need to be returned back to our office once you have completed Sections VI and VII. A map is attached with their legals that indicate the areas that are under water, frequently flooding, occasional flooding and areas that are not flooding. Legends are attached to this map to identify these areas.

I see no other adverse environmental effects for which the Natural Resources Conservation Service is responsible for evaluating.

I wish you well with your project and if our local NRCS office in Cottonwood Falls can be of any assistance, don't hesitate to call.

Sincerely,

WILLIAM M. GILLIAM
Assistant State Conservationist

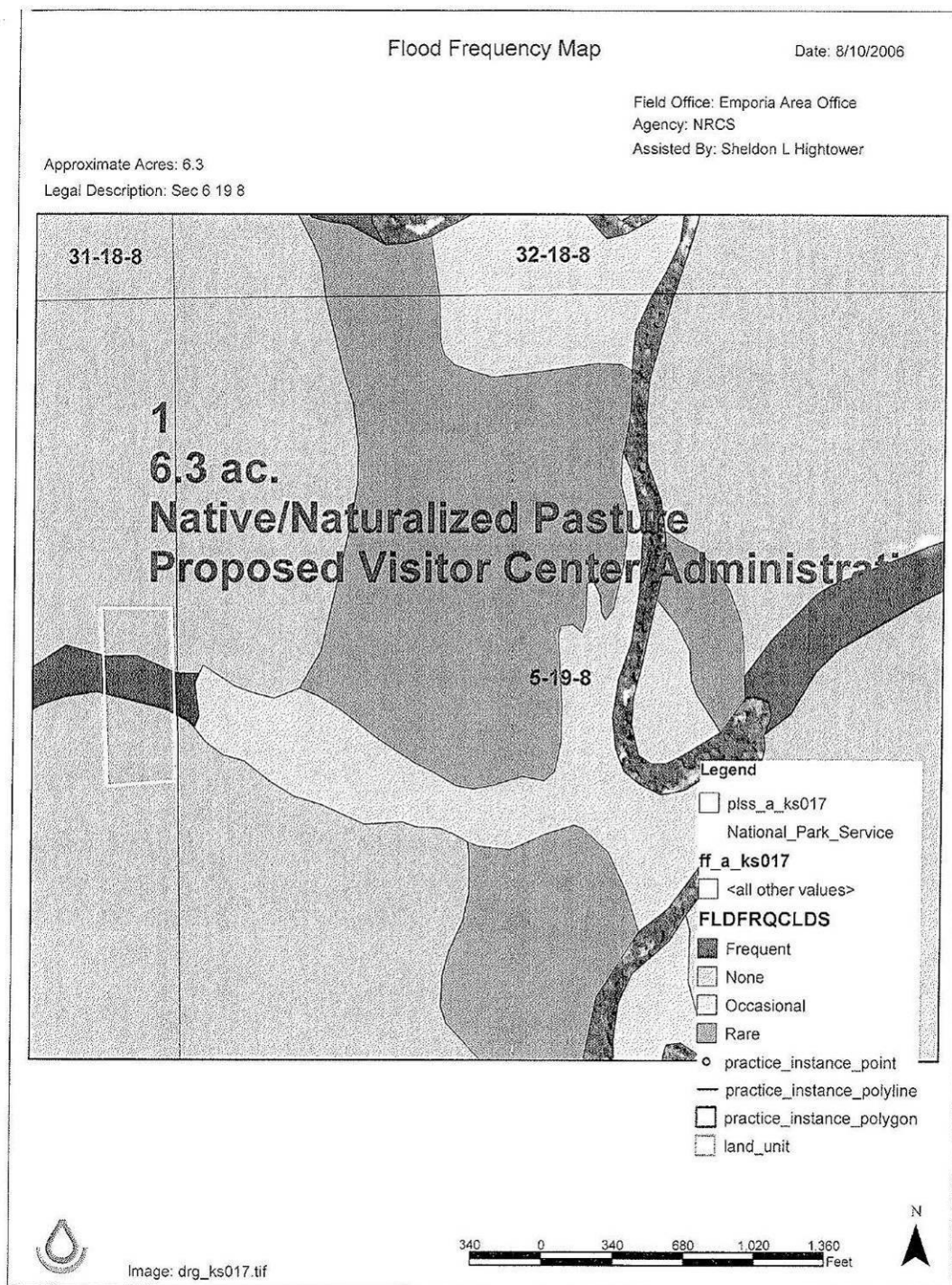
Attachments

cc w/o attachment:

Gay L. Spencer, District Conservationist, NRCS, Cottonwood Falls, Kansas
Lynn E. Thurlow, Soil Conservationist, NRCS, Salina, Kansas

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

An Equal Opportunity Provider and Employer



Site Assessment Scoring for the Twelve Factors Used in FPPA

The Site Assessment criteria used in the Farmland Protection Policy Act (FPPA) rule are designed to assess important factors other than the agricultural value of the land when determining which alternative sites should receive the highest level of protection from conversion to non agricultural uses.

Twelve factors are used for Site Assessment and ten factors for corridor-type sites. Each factor is listed in an outline form, without detailed definitions or guidelines to follow in the rating process. The purpose of this document is to expand the definitions of use of each of the twelve Site Assessment factors so that all persons can have a clear understanding as to what each factor is intended to evaluate and how points are assigned for given conditions.

In each of the 12 factors a number rating system is used to determine which sites deserve the most protection from conversion to non-farm uses. The higher the number value given to a proposed site, the more protection it will receive. The maximum scores are 10, 15 and 20 points, depending upon the relative importance of each particular question. If a question significantly relates to why a parcel of land should not be converted, the question has a maximum possible protection value of 20, whereas a question which does not have such a significant impact upon whether a site would be converted, would have fewer maximum points possible, for example 10.

The following guidelines should be used in rating the twelve Site Assessment criteria:

1. How much land is in non-urban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent:	15 points
90-20 percent:	14 to 1 points
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the area within one mile of the proposed site is non-urban area. For purposes of this rule, "non-urban" should include:

- Agricultural land (crop-fruit trees, nuts, oilseed)
- Range land
- Forest land
- Golf Courses
- Non paved parks and recreational areas
- Mining sites
- Farm Storage
- Lakes, ponds and other water bodies
- Rural roads, and through roads without houses or buildings
- Open space
- Wetlands
- Fish production
- Pasture or hayland

Urban uses include:

- Houses (other than farm houses)
- Apartment buildings
- Commercial buildings
- Industrial buildings
- Paved recreational areas (i.e. tennis courts)
- Streets in areas with 30 structures per 40 acres
- Gas stations

- Equipment, supply stores
- Off-farm storage
- Processing plants
- Shopping malls
- Utilities/Services
- Medical buildings

In rating this factor, an area one-mile from the outer edge of the proposed site should be outlined on a current photo; the areas that are urban should be outlined. For rural houses and other buildings with unknown sizes, use 1 and 1/3 acres per structure. For roads with houses on only one side, use one half of road for urban and one half for non-urban.

The purpose of this rating process is to insure that the most valuable and viable farmlands are protected from development projects sponsored by the Federal Government. With this goal in mind, factor S1 suggests that the more agricultural lands surrounding the parcel boundary in question, the more protection from development this site should receive. Accordingly, a site with a large quantity of non-urban land surrounding it will receive a greater number of points for protection from development. Thus, where more than 90 percent of the area around the proposed site (do not include the proposed site in this assessment) is non-urban, assign 15 points. Where 20 percent or less is non-urban, assign 0 points. Where the area lies between 20 and 90 percent non-urban, assign appropriate points from 14 to 1, as noted below.

Percent Non-Urban Land within 1 mile	Points
90 percent or greater	15
85 to 89 percent	14
80 to 84 percent	13
75 to 79 percent	12
70 to 74 percent	11
65 to 69 percent	10
60 to 64 percent	9
55 to 59 percent	8
50 to 54 percent	7
45 to 49 percent	6
40 to 44 percent	5
35 to 39 percent	4
30 to 34 percent	3
25 to 29 percent	2
21 to 24 percent	1
20 percent or less	0

2. How much of the perimeter of the site borders on land in non-urban use?

More than 90 percent:	10 points
90 to 20 percent:	9 to 1 point(s)
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the land adjacent to the proposed site is non-urban use. Where factor #1 evaluates the general location of the proposed site, this factor evaluates the immediate perimeter of the site. The definition of urban and non-urban uses in factor #1 should be used for this factor.

In rating the second factor, measure the perimeter of the site that is in non-urban and urban use. Where more than 90 percent of the perimeter is in non-urban use, score this factor 10 points. Where less than 20 percent, assign 0 points. If a road is next to the perimeter, class the area according to the

use on the other side of the road for that area. Use 1 and 1/3 acre per structure if not otherwise known. Where 20 to 90 percent of the perimeter is non-urban, assign points as noted below:

Percentage of Perimeter Bordering Land	Points
90 percent or greater	10
82 to 89 percent	9
74 to 81 percent	8
65 to 73 percent	7
58 to 65 percent	6
50 to 57 percent	5
42 to 49 percent	4
34 to 41 percent	3
27 to 33 percent	2
21 to 26 percent	1
20 percent or Less	0

3. How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last ten years?

More than 90 percent:	20 points
90 to 20 percent:	19 to 1 point(s)
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the proposed conversion site has been used or managed for agricultural purposes in the past 10 years.

Land is being farmed when it is used or managed for food or fiber, to include timber products, fruit, nuts, grapes, grain, forage, oil seed, fish and meat, poultry and dairy products.

Land that has been left to grow up to native vegetation without management or harvest will be considered as abandoned and therefore not farmed. The proposed conversion site should be evaluated and rated according to the percent, of the site farmed.

If more than 90 percent of the site has been farmed 5 of the last 10 years score the site as follows:

Percentage of Site Farmed	Points
90 percent or greater	20
86 to 89 percent	19
82 to 85 percent	18
78 to 81 percent	17
74 to 77 percent	16
70 to 73 percent	15
66 to 69 percent	14
62 to 65 percent	13
58 to 61 percent	12
54 to 57 percent	11
50 to 53 percent	10
46 to 49 percent	9
42 to 45 percent	8
38 to 41 percent	7
35 to 37 percent	6
32 to 34 percent	5
29 to 31 percent	4
26 to 28 percent	3

23 to 25 percent	2
20 to 22 percent percent or Less	1
Less than 20 percent	0

4. Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected:	20 points
Site is not protected:	0 points

This factor is designed to evaluate the extent to which state and local government and private programs have made efforts to protect this site from conversion.

State and local policies and programs to protect farmland include:

State Policies and Programs to Protect Farmland

1. Tax Relief:

A. Differential Assessment: Agricultural lands are taxed on their agricultural use value, rather than at market value. As a result, farmers pay fewer taxes on their land, which helps keep them in business, and therefore helps to insure that the farmland will not be converted to nonagricultural uses.

1. Preferential Assessment for Property Tax: Landowners with parcels of land used for agriculture are given the privilege of differential assessment.
2. Deferred Taxation for Property Tax: Landowners are deterred from converting their land to nonfarm uses, because if they do so, they must pay back taxes at market value.
3. Restrictive Agreement for Property Tax: Landowners who want to receive Differential Assessment must agree to keep their land in - eligible use.

B. Income Tax Credits

Circuit Breaker Tax Credits: Authorize an eligible owner of farmland to apply some or all of the property taxes on his or her farmland and farm structures as a tax credit against the owner's state income tax.

C. Estate and Inheritance Tax Benefits

Farm Use Valuation for Death Tax: Exemption of state tax liability to eligible farm estates.

2. "Right to farm" laws:

Prohibits local governments from enacting laws which will place restrictions upon normally accepted farming practices, for example, the generation of noise, odor or dust.

3. Agricultural Districting:

Wherein farmers voluntarily organize districts of agricultural land to be legally recognized geographic areas. These farmers receive benefits, such as protection from annexation, in exchange for keeping land within the district for a given number of years.

4. Land Use Controls: Agricultural Zoning.

Types of Agricultural Zoning Ordinances include:

- A. Exclusive: In which the agricultural zone is restricted to only farm-related dwellings, with, for example, a minimum of 40 acres per dwelling unit.
- B. Non-Exclusive: In which non-farm dwellings are allowed, but the density remains low, such as 20 acres per dwelling unit.

Additional Zoning techniques include:

- A. Sliding Scale: This method looks at zoning according to the total size of the parcel owned. For example, the number of dwelling units per a given number of acres may change from county to county according to the existing land acreage to dwelling unit ratio of surrounding parcels of land within the specific area.

- B. Point System or Numerical Approach: Approaches land use permits on a case by case basis.

LESA: The LESA system (Land Evaluation-Site Assessment) is used as a tool to help assess options for land use on an evaluation of productivity weighed against commitment to urban development.

- C. Conditional Use: Based upon the evaluation on a case by case basis by the Board of Zoning Adjustment. Also may include the method of using special land use permits.

5. Development Rights:

- A. Purchase of Development Rights (PDR): Where development rights are purchased by Government action.

Buffer Zoning Districts: Buffer Zoning Districts are an example of land purchased by Government action. This land is included in zoning ordinances in order to preserve and protect agricultural lands from non-farm land uses encroaching upon them.

- B. Transfer of Development Rights (TDR): Development rights are transferable for use in other locations designated as receiving areas. TDR is considered a locally based action (not state), because it requires a voluntary decision on the part of the individual landowners.

6. Governor's Executive Order: Policy made by the Governor, stating the importance of agriculture, and the preservation of agricultural lands. The Governor orders the state agencies to avoid the unnecessary conversion of important farmland to nonagricultural uses.

7. Voluntary State Programs:

- A. California's Program of Restrictive Agreements and Differential Assessments: The California Land Conservation Act of 1965, commonly known as the Williamson Act, allows cities, counties and individual landowners to form agricultural preserves and enter into contracts for 10 or more years to insure that these parcels of land remain strictly for agricultural use. Since 1972 the Act has extended eligibility to recreational and open space lands such as scenic highway corridors, salt ponds and wildlife preserves. These contractually restricted lands may be taxed differentially for their real value. One hundred-acre districts constitute the minimum land size eligible.

Suggestion: An improved version of the Act would state that if the land is converted after the contract expires, the landowner must pay the difference in the taxes between market value for the land and the agricultural tax value which he or she had been

paying under the Act. This measure would help to insure that farmland would not be converted after the 10 year period ends.

- B. Maryland Agricultural Land Preservation Program: Agricultural landowners within agricultural districts have the opportunity to sell their development rights to the Maryland Land Preservation Foundation under the agreement that these landowners will not subdivide or develop their land for an initial period of five years. After five years the landowner may terminate the agreement with one year notice.

As is stated above under the California Williamson Act, the landowner should pay the back taxes on the property if he or she decides to convert the land after the contract expires, in order to discourage such conversions.

- C. Wisconsin Income Tax Incentive Program: The Wisconsin Farmland Preservation Program of December 1977 encourages local jurisdictions in Wisconsin to adopt agricultural preservation plans or exclusive agricultural district zoning ordinances in exchange for credit against state income tax and exemption from special utility assessment. Eligible candidates include local governments and landowners with at least 35 acres of land per dwelling unit in agricultural use and gross farm profits of at least \$6,000 per year, or \$18,000 over three years.

8. Mandatory State Programs:

- A. The Environmental Control Act in the state of Vermont was adopted in 1970 by the Vermont State Legislature. The Act established an environmental board with 9 members (appointed by the Governor) to implement a planning process and a permit system to screen most subdivisions and development proposals according to specific criteria stated in the law. The planning process consists of an interim and a final Land Capability and Development Plan, the latter of which acts as a policy plan to control development. The policies are written in order to:
 - prevent air and water pollution;
 - protect scenic or natural beauty, historic sites and rare and irreplaceable natural areas; and
 - consider the impacts of growth and reduction of development on areas of primary agricultural soils.
- B. The California State Coastal Commission: In 1976 the Coastal Act was passed to establish a permanent Coastal Commission with permit and planning authority. The purpose of the Coastal Commission was and is to protect the sensitive coastal zone environment and its resources, while accommodating the social and economic needs of the state. The Commission has the power to regulate development in the coastal zones by issuing permits on a case by case basis until local agencies can develop their own coastal plans, which must be certified by the Coastal Commission.
- C. Hawaii's Program of State Zoning: In 1961, the Hawaii State Legislature established Act 187, the Land Use Law, to protect the farmland and the welfare of the local people of Hawaii by planning to avoid "unnecessary urbanization". The Law made all state lands into four districts: agricultural, conservation, rural and urban. The Governor appointed members to a State Land Use Commission, whose duties were to uphold the Law and form the boundaries of the four districts. In addition to state zoning, the Land Use Law introduced a program of Differential Assessment, wherein agricultural landowners paid taxes on their land for its agricultural use value, rather than its market value.
- D. The Oregon Land Use Act of 1973: This act established the Land Conservation and Development Commission (LCDC) to provide statewide planning goals and guidelines.

Under this Act, Oregon cities and counties are each required to draw up a comprehensive plan, consistent with statewide planning goals. Agricultural land preservation is high on the list of state goals to be followed locally.

If the proposed site is subject to or has used one or more of the above farmland protection programs or policies, score the site 20 points. If none of the above policies or programs apply to this site, score 0 points.

5. How close is the site to an urban built-up area?

The site is 2 miles or more from an urban built-up area	15 points
The site is more than 1 mile but less than 2 miles from an urban built-up area	10 points
The site is less than 1 mile from, but is not adjacent to an urban built-up area	5 points
The site is adjacent to an urban built-up area	0 points

This factor is designed to evaluate the extent to which the proposed site is located next to an existing urban area. The urban built-up area must be 2500 population. The measurement from the built-up area should be made from the point at which the density is 30 structures per 40 acres and with no open or non-urban land existing between the major built-up areas and this point. Suburbs adjacent to cities or urban built-up areas should be considered as part of that urban area.

For greater accuracy, use the following chart to determine how much protection the site should receive according to its distance from an urban area. See chart below:

Distance From Perimeter of Site to Urban Area	Points
More than 10,560 feet	15
9,860 to 10,559 feet	14
9,160 to 9,859 feet	13
8,460 to 9,159 feet	12
7,760 to 8,459 feet	11
7,060 to 7,759 feet	10
6,360 to 7,059 feet	9
5,660 to 6,359 feet	8
4,960 to 5,659 feet	7
4,260 to 4,959 feet	6
3,560 to 4,259 feet	5
2,860 to 3,559 feet	4
2,160 to 2,859 feet	3
1,460 to 2,159 feet	2
760 to 1,459 feet	1
Less than 760 feet (adjacent)	0

6. How close is the site to water lines, sewer lines and/or other local facilities and services whose capacities and design would promote nonagricultural use?

None of the services exist nearer than 3 miles from the site	15 points
Some of the services exist more than one but less than 3 miles from the site	10 points
All of the services exist within 1/2 mile of the site	0 points

This question determines how much infrastructure (water, sewer, etc.) is in place which could facilitate nonagricultural development. The fewer facilities in place, the more difficult it is to develop an area. Thus, if a proposed site is further away from these services (more than 3 miles distance away), the site should be awarded the highest number of points (15). As the distance of the parcel of land to services decreases, the number of points awarded declines as well. So, when the site is equal to or further than 1 mile but less than 3 miles away from services, it should be given 10 points. Accordingly, if this distance is 1/2 mile to less than 1 mile, award 5 points; and if the distance from land to services is less than 1/2 mile, award 0 points.

Distance to public facilities should be measured from the perimeter of the parcel in question to the nearest site(s) where necessary facilities are located. If there is more than one distance (i.e. from site to water and from site to sewer), use the average distance (add all distances and then divide by the number of different distances to get the average).

Facilities which could promote nonagricultural use include:

- Water lines
- Sewer lines
- Power lines
- Gas lines
- Circulation (roads)
- Fire and police protection
- Schools

7. Is the farm unit(s) containing the site (before the project) as large as the average-size farming unit in the county? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage of Farm Units in Operation with \$1,000 or more in sales.)

As large or larger:	10 points
Below average: Deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more is below average	9 to 0 points

This factor is designed to determine how much protection the site should receive, according to its size in relation to the average size of farming units within the county. The larger the parcel of land, the more agricultural use value the land possesses, and vice versa. Thus, if the farm unit is as large or larger than the county average, it receives the maximum number of points (10). The smaller the parcel of land compared to the county average, the fewer number of points given. Please see below:

Parcel Size in Relation to Average County Size	Points
Same size or larger than average (100 percent)	10
95 percent of average	9
90 percent of average	8
85 percent of average	7
80 percent of average	6
75 percent of average	5
70 percent of average	4
65 percent of average	3
60 percent of average	2
55 percent of average	1
50 percent or below county average	0

State and local Natural Resources Conservation Service offices will have the average farm size information, provided by the latest available Census of Agriculture data.

8. If this site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project	10 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project	9 to 1 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project	0 points

This factor tackles the question of how the proposed development will affect the rest of the land on the farm. The site which deserves the most protection from conversion will receive the greatest number of points, and vice versa. For example, if the project is small, such as an extension on a house, the rest of the agricultural land would remain farmable, and thus a lower number of points is given to the site. Whereas if a large-scale highway is planned, a greater portion of the land (not including the site) will become non-farmable, since access to the farmland will be blocked; and thus, the site should receive the highest number of points (10) as protection from conversion.

Conversion uses of the Site Which Would Make the Rest of the Land Non-Farmable by Interfering with Land Patterns

Conversions which make the rest of the property nonfarmable include any development which blocks accessibility to the rest of the site. Examples are highways, railroads, dams or development along the front of a site restricting access to the rest of the property.

The point scoring is as follows:

Amount of Land Not Including the Site Which Will Become Non-Farmable	Points
25 percent or greater	10
23 - 24 percent	9
21 - 22 percent	8
19 - 20 percent	7
17 - 18 percent	6
15 - 16 percent	5
13 - 14 percent	4
11 - 12 percent	3
9 - 11 percent	2
6 - 8 percent	1
5 percent or less	0

9. Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available	5 points
Some required services are available	4 to 1 point(s)
No required services are available	0 points

This factor is used to assess whether there are adequate support facilities, activities and industry to keep the farming business in business. The more support facilities available to the agricultural

landowner, the more feasible it is for him or her to stay in production. In addition, agricultural support facilities are compatible with farmland. This fact is important, because some land uses are not compatible; for example, development next to farmland can be dangerous to the welfare of the agricultural land, as a result of pressure from the neighbors who often do not appreciate the noise, smells and dust intrinsic to farmland. Thus, when all required agricultural support services are available, the maximum number of points (5) are awarded. When some services are available, 4 to 1 point(s) are awarded; and consequently, when no services are available, no points are given. See below:

Percent of Services Available	Points
100 percent	5
75 to 99 percent	4
50 to 74 percent	3
25 to 49 percent	2
1 to 24 percent	1
No services	0

10. Does the site have substantial and well-maintained on farm investments such as barns, other storage buildings, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment	20 points
Moderate amount of non-farm investment	19 to 1 point(s)
No on-farm investments	0 points

This factor assesses the quantity of agricultural facilities in place on the proposed site. If a significant agricultural infrastructure exists, the site should continue to be used for farming, and thus the parcel will receive the highest amount of points towards protection from conversion or development. If there is little on farm investment, the site will receive comparatively less protection. See-below:

Amount of On-farm Investment	Points
As much or more than necessary to maintain production (100 percent)	20
95 to 99 percent	19
90 to 94 percent	18
85 to 89 percent	17
80 to 84 percent	16
75 to 79 percent	15
70 to 74 percent	14
65 to 69 percent	13
60 to 64 percent	12
55 to 59 percent	11
50 to 54 percent	10
45 to 49 percent	9
40 to 44 percent	8
35 to 39 percent	7
30 to 34 percent	6
25 to 29 percent	5
20 to 24 percent	4
15 to 19 percent	3
10 to 14 percent	2
5 to 9 percent	1
0 to 4 percent	0

11. Would the project at this site, by converting farmland to nonagricultural use, reduce the support for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted	10 points
Some reduction in demand for support services if the site is converted	9 to 1 point(s)
No significant reduction in demand for support services if the site is converted	0 points

This factor determines whether there are other agriculturally related activities, businesses or jobs dependent upon the working of the pre-converted site in order for the others to remain in production. The more people and farming activities relying upon this land, the more protection it should receive from conversion. Thus, if a substantial reduction in demand for support services were to occur as a result of conversions, the proposed site would receive a high score of 10; some reduction in demand would receive 9 to 1 point(s), and no significant reduction in demand would receive no points.

Specific points are outlined as follows:

Amount of Reduction in Support Services if Site is Converted to Nonagricultural Use	Points
Substantial reduction (100 percent)	10
90 to 99 percent	9
80 to 89 percent	8
70 to 79 percent	7
60 to 69 percent	6
50 to 59 percent	5
40 to 49 percent	4
30 to 39 percent	3
20 to 29 percent	2
10 to 19 percent	1
No significant reduction (0 to 9 percent)	0

12. Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of the surrounding farmland to nonagricultural use?

Proposed project is incompatible with existing agricultural use of surrounding farmland	10 points
Proposed project is tolerable of existing agricultural use of surrounding farmland	9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland	0 points

Factor 12 determines whether conversion of the proposed agricultural site will eventually cause the conversion of neighboring farmland as a result of incompatibility of use of the first with the latter. The more incompatible the proposed conversion is with agriculture, the more protection this site receives from conversion. Therefore, if the proposed conversion is incompatible with agriculture, the site receives 10 points. If the project is tolerable with agriculture, it receives 9 to 1 points; and if the proposed conversion is compatible with agriculture, it receives 0 points.



United States Department of Agriculture
Natural Resources Conservation Service
3020 W. 18th Avenue, Suite B
Emporia, Kansas 66801-5140

See 8/4/06 *(2006)*
"A Partner in Conservation Since 1935"

AUG - 3 2006

Phone: 620-343-7276
FAX: 620-343-7871
www.ks.nrcs.usda.gov

August 2, 2006

Stephen Miller, Superintendent
Tallgrass Prairie National Preserve Office
P.O. Box 585
Cottonwood Falls, Kansas 66845-0585

Dear Mr. Miller,

Thank you for the opportunity to review the proposed project for a maintenance facility along the east side of the Strong City sewage lagoons. This project is located in Chase County.

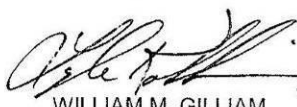
Since the proposed project is on land physically located outside the defined city limits and that the proposed project may convert farmland, as defined in the Farmland Protection Policy Act to nonagricultural uses, this project is affected by the Farmland Protection Policy Act and therefore, an AD-1006 form is required. I have completed Parts II, IV and V of the AD-1006 form and I am returning this form back to you to complete Parts VI and VII of this form.

Enclosed is the Site Assessment Criteria information for completing Part VI. The AD-1006 form will need to be returned back to our office once you have completed Sections VI and VII. A map is attached with their legals that indicate the areas that are under water, frequently flooding, occasional flooding and areas that are not flooding. Legends are attached to this map to identify these areas.

I see no other adverse environmental effects for which the Natural Resources Conservation Service is responsible for evaluating.

I wish you well with your project and if our local NRCS office in Cottonwood Falls can be of any assistance, don't hesitate to call.

Sincerely,


WILLIAM M. GILLIAM *Acting*
Assistant State Conservationist

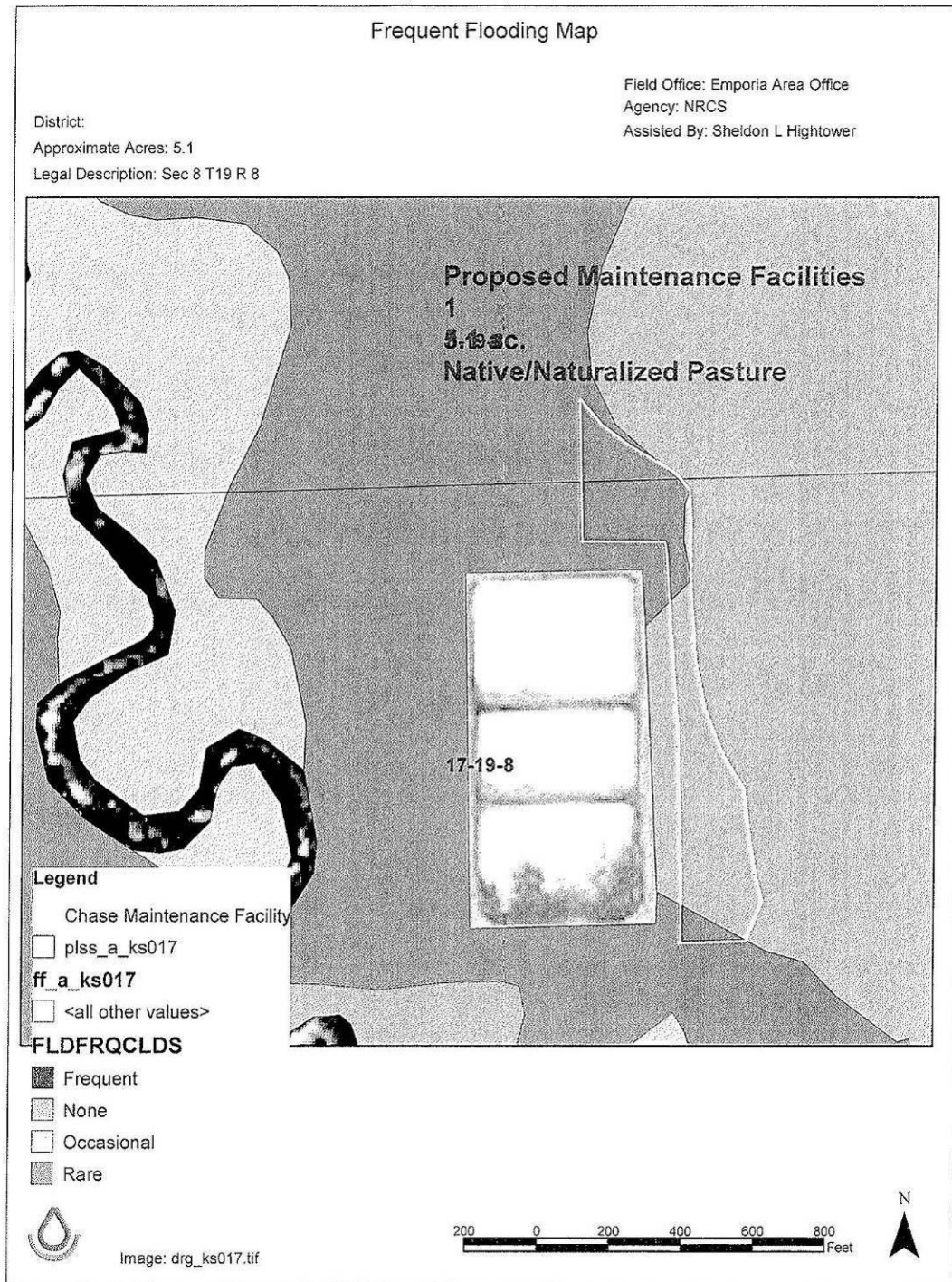
Attachments

cc w/o attachment:

Gay L. Spencer, District Conservationist, NRCS, Cottonwood Falls, Kansas
Lynn E. Thurlow, Soil Conservationist, NRCS, Salina, Kansas

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

An Equal Opportunity Provider and Employer



STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form.

Step 2 - Originator will send copies A, B and C together with maps indicating locations of site(s), to the Natural Resources Conservation Service (NRCS) local field office and retain copy D for their files. (Note: NRCS has a field office in most counties in the U.S. The field office is usually located in the county seat. A list of field office locations are available from the NRCS State Conservationist in each state).

Step 3 - NRCS will, within 45 calendar days after receipt of form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland.

Step 4 - In cases where farmland covered by the FPPA will be converted by the proposed project, NRCS field offices will complete Parts II, IV and V of the form.

Step 5 - NRCS will return copy A and B of the form to the Federal agency involved in the project. (Copy C will be retained for NRCS records).

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 - The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA and the agency's internal policies.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

Part I: In completing the "County And State" questions list all the local governments that are responsible for local land controls where site(s) are to be evaluated.

Part III: In completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

Part VI: Do not complete Part VI if a local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in § 658.5 (b) of CFR. In cases of corridor-type projects such as transportation, powerline and flood control, criteria #5 and #6 will not apply and will be weighed zero, however, criterion #8 will be weighed a maximum of 25 points, and criterion #11 a maximum of 25 points.

Individual Federal agencies at the national level, may assign relative weights among the 12 site assessment criteria other than those shown in the FPPA rule. In all cases where other weights are assigned relative adjustments must be made to maintain the maximum total weight points at 160.

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the FPPA rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160. Example: if the Site Assessment maximum is 200 points, and alternative Site "A" is rated 180 points:

Total points assigned Site A = $\frac{180}{200} \times 160 = 144$ points for Site "A."

Maximum points possible 200

Site Assessment Scoring for the Twelve Factors Used in FPPA

The Site Assessment criteria used in the Farmland Protection Policy Act (FPPA) rule are designed to assess important factors other than the agricultural value of the land when determining which alternative sites should receive the highest level of protection from conversion to non agricultural uses.

Twelve factors are used for Site Assessment and ten factors for corridor-type sites. Each factor is listed in an outline form, without detailed definitions or guidelines to follow in the rating process. The purpose of this document is to expand the definitions of use of each of the twelve Site Assessment factors so that all persons can have a clear understanding as to what each factor is intended to evaluate and how points are assigned for given conditions.

In each of the 12 factors a number rating system is used to determine which sites deserve the most protection from conversion to non-farm uses. The higher the number value given to a proposed site, the more protection it will receive. The maximum scores are 10, 15 and 20 points, depending upon the relative importance of each particular question. If a question significantly relates to why a parcel of land should not be converted, the question has a maximum possible protection value of 20, whereas a question which does not have such a significant impact upon whether a site would be converted, would have fewer maximum points possible, for example 10.

The following guidelines should be used in rating the twelve Site Assessment criteria:

1. How much land is in non-urban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent:	15 points
90-20 percent:	14 to 1 points
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the area within one mile of the proposed site is non-urban area. For purposes of this rule, "non-urban" should include:

- Agricultural land (crop-fruit trees, nuts, oilseed)
- Range land
- Forest land
- Golf Courses
- Non paved parks and recreational areas
- Mining sites
- Farm Storage
- Lakes, ponds and other water bodies
- Rural roads, and through roads without houses or buildings
- Open space
- Wetlands
- Fish production
- Pasture or hayland

Urban uses include:

- Houses (other than farm houses)
- Apartment buildings
- Commercial buildings
- Industrial buildings
- Paved recreational areas (i.e. tennis courts)
- Streets in areas with 30 structures per 40 acres
- Gas stations

- Equipment, supply stores
- Off-farm storage
- Processing plants
- Shopping malls
- Utilities/Services
- Medical buildings

In rating this factor, an area one-mile from the outer edge of the proposed site should be outlined on a current photo; the areas that are urban should be outlined. For rural houses and other buildings with unknown sizes, use 1 and 1/3 acres per structure. For roads with houses on only one side, use one half of road for urban and one half for non-urban.

The purpose of this rating process is to insure that the most valuable and viable farmlands are protected from development projects sponsored by the Federal Government. With this goal in mind, factor S1 suggests that the more agricultural lands surrounding the parcel boundary in question, the more protection from development this site should receive. Accordingly, a site with a large quantity of non-urban land surrounding it will receive a greater number of points for protection from development. Thus, where more than 90 percent of the area around the proposed site (do not include the proposed site in this assessment) is non-urban, assign 15 points. Where 20 percent or less is non-urban, assign 0 points. Where the area lies between 20 and 90 percent non-urban, assign appropriate points from 14 to 1, as noted below.

Percent Non-Urban Land within 1 mile	Points
90 percent or greater	15
85 to 89 percent	14
80 to 84 percent	13
75 to 79 percent	12
70 to 74 percent	11
65 to 69 percent	10
60 to 64 percent	9
55 to 59 percent	8
50 to 54 percent	7
45 to 49 percent	6
40 to 44 percent	5
35 to 39 percent	4
30 to 34 percent	3
25 to 29 percent	2
21 to 24 percent	1
20 percent or less	0

2. How much of the perimeter of the site borders on land in non-urban use?

More than 90 percent:	10 points
90 to 20 percent:	9 to 1 point(s)
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the land adjacent to the proposed site is non-urban use. Where factor #1 evaluates the general location of the proposed site, this factor evaluates the immediate perimeter of the site. The definition of urban and non-urban uses in factor #1 should be used for this factor.

In rating the second factor, measure the perimeter of the site that is in non-urban and urban use. Where more than 90 percent of the perimeter is in non-urban use, score this factor 10 points. Where less than 20 percent, assign 0 points. If a road is next to the perimeter, class the area according to the

use on the other side of the road for that area. Use 1 and 1/3 acre per structure if not otherwise known. Where 20 to 90 percent of the perimeter is non-urban, assign points as noted below:

Percentage of Perimeter Bordering Land	Points
90 percent or greater	10
82 to 89 percent	9
74 to 81 percent	8
65 to 73 percent	7
58 to 65 percent	6
50 to 57 percent	5
42 to 49 percent	4
34 to 41 percent	3
27 to 33 percent	2
21 to 26 percent	1
20 percent or Less	0

3. How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last ten years?

More than 90 percent:	20 points
90 to 20 percent:	19 to 1 point(s)
Less than 20 percent:	0 points

This factor is designed to evaluate the extent to which the proposed conversion site has been used or managed for agricultural purposes in the past 10 years.

Land is being farmed when it is used or managed for food or fiber, to include timber products, fruit, nuts, grapes, grain, forage, oil seed, fish and meat, poultry and dairy products.

Land that has been left to grow up to native vegetation without management or harvest will be considered as abandoned and therefore not farmed. The proposed conversion site should be evaluated and rated according to the percent, of the site farmed.

If more than 90 percent of the site has been farmed 5 of the last 10 years score the site as follows:

Percentage of Site Farmed	Points
90 percent or greater	20
86 to 89 percent	19
82 to 85 percent	18
78 to 81 percent	17
74 to 77 percent	16
70 to 73 percent	15
66 to 69 percent	14
62 to 65 percent	13
58 to 61 percent	12
54 to 57 percent	11
50 to 53 percent	10
46 to 49 percent	9
42 to 45 percent	8
38 to 41 percent	7
35 to 37 percent	6
32 to 34 percent	5
29 to 31 percent	4
26 to 28 percent	3

23 to 25 percent	2
20 to 22 percent percent or Less	1
Less than 20 percent	0

4. Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected:	20 points
Site is not protected:	0 points

This factor is designed to evaluate the extent to which state and local government and private programs have made efforts to protect this site from conversion.

State and local policies and programs to protect farmland include:

State Policies and Programs to Protect Farmland

1. Tax Relief:

A. Differential Assessment: Agricultural lands are taxed on their agricultural use value, rather than at market value. As a result, farmers pay fewer taxes on their land, which helps keep them in business, and therefore helps to insure that the farmland will not be converted to nonagricultural uses.

1. Preferential Assessment for Property Tax: Landowners with parcels of land used for agriculture are given the privilege of differential assessment.
2. Deferred Taxation for Property Tax: Landowners are deterred from converting their land to nonfarm uses, because if they do so, they must pay back taxes at market value.
3. Restrictive Agreement for Property Tax: Landowners who want to receive Differential Assessment must agree to keep their land in - eligible use.

B. Income Tax Credits

Circuit Breaker Tax Credits: Authorize an eligible owner of farmland to apply some or all of the property taxes on his or her farmland and farm structures as a tax credit against the owner's state income tax.

C. Estate and Inheritance Tax Benefits

Farm Use Valuation for Death Tax: Exemption of state tax liability to eligible farm estates.

2. "Right to farm" laws:

Prohibits local governments from enacting laws which will place restrictions upon normally accepted farming practices, for example, the generation of noise, odor or dust.

3. Agricultural Districting:

Wherein farmers voluntarily organize districts of agricultural land to be legally recognized geographic areas. These farmers receive benefits, such as protection from annexation, in exchange for keeping land within the district for a given number of years.

4. Land Use Controls: Agricultural Zoning.

Types of Agricultural Zoning Ordinances include:

- A. Exclusive: In which the agricultural zone is restricted to only farm-related dwellings, with, for example, a minimum of 40 acres per dwelling unit.
- B. Non-Exclusive: In which non-farm dwellings are allowed, but the density remains low, such as 20 acres per dwelling unit.

Additional Zoning techniques include:

- A. Sliding Scale: This method looks at zoning according to the total size of the parcel owned. For example, the number of dwelling units per a given number of acres may change from county to county according to the existing land acreage to dwelling unit ratio of surrounding parcels of land within the specific area.
- B. Point System or Numerical Approach: Approaches land use permits on a case by case basis.

LESA: The LESA system (Land Evaluation-Site Assessment) is used as a tool to help assess options for land use on an evaluation of productivity weighed against commitment to urban development.
- C. Conditional Use: Based upon the evaluation on a case by case basis by the Board of Zoning Adjustment. Also may include the method of using special land use permits.

5. Development Rights:

- A. Purchase of Development Rights (PDR): Where development rights are purchased by Government action.

Buffer Zoning Districts: Buffer Zoning Districts are an example of land purchased by Government action. This land is included in zoning ordinances in order to preserve and protect agricultural lands from non-farm land uses encroaching upon them.
- B. Transfer of Development Rights (TDR): Development rights are transferable for use in other locations designated as receiving areas. TDR is considered a locally based action (not state), because it requires a voluntary decision on the part of the individual landowners.

6. Governor's Executive Order: Policy made by the Governor, stating the importance of agriculture, and the preservation of agricultural lands. The Governor orders the state agencies to avoid the unnecessary conversion of important farmland to nonagricultural uses.

7. Voluntary State Programs:

- A. California's Program of Restrictive Agreements and Differential Assessments: The California Land Conservation Act of 1965, commonly known as the Williamson Act, allows cities, counties and individual landowners to form agricultural preserves and enter into contracts for 10 or more years to insure that these parcels of land remain strictly for agricultural use. Since 1972 the Act has extended eligibility to recreational and open space lands such as scenic highway corridors, salt ponds and wildlife preserves. These contractually restricted lands may be taxed differentially for their real value. One hundred-acre districts constitute the minimum land size eligible.

Suggestion: An improved version of the Act would state that if the land is converted after the contract expires, the landowner must pay the difference in the taxes between market value for the land and the agricultural tax value which he or she had been

paying under the Act. This measure would help to insure that farmland would not be converted after the 10 year period ends.

- B. Maryland Agricultural Land Preservation Program: Agricultural landowners within agricultural districts have the opportunity to sell their development rights to the Maryland Land Preservation Foundation under the agreement that these landowners will not subdivide or develop their land for an initial period of five years. After five years the landowner may terminate the agreement with one year notice.

As is stated above under the California Williamson Act, the landowner should pay the back taxes on the property if he or she decides to convert the land after the contract expires, in order to discourage such conversions.

- C. Wisconsin Income Tax Incentive Program: The Wisconsin Farmland Preservation Program of December 1977 encourages local jurisdictions in Wisconsin to adopt agricultural preservation plans or exclusive agricultural district zoning ordinances in exchange for credit against state income tax and exemption from special utility assessment. Eligible candidates include local governments and landowners with at least 35 acres of land per dwelling unit in agricultural use and gross farm profits of at least \$6,000 per year, or \$18,000 over three years.

8. Mandatory State Programs:

- A. The Environmental Control Act in the state of Vermont was adopted in 1970 by the Vermont State Legislature. The Act established an environmental board with 9 members (appointed by the Governor) to implement a planning process and a permit system to screen most subdivisions and development proposals according to specific criteria stated in the law. The planning process consists of an interim and a final Land Capability and Development Plan, the latter of which acts as a policy plan to control development. The policies are written in order to:
- prevent air and water pollution;
 - protect scenic or natural beauty, historic sites and rare and irreplaceable natural areas; and
 - consider the impacts of growth and reduction of development on areas of primary agricultural soils.
- B. The California State Coastal Commission: In 1976 the Coastal Act was passed to establish a permanent Coastal Commission with permit and planning authority. The purpose of the Coastal Commission was and is to protect the sensitive coastal zone environment and its resources, while accommodating the social and economic needs of the state. The Commission has the power to regulate development in the coastal zones by issuing permits on a case by case basis until local agencies can develop their own coastal plans, which must be certified by the Coastal Commission.
- C. Hawaii's Program of State Zoning: In 1961, the Hawaii State Legislature established Act 187, the Land Use Law, to protect the farmland and the welfare of the local people of Hawaii by planning to avoid "unnecessary urbanization". The Law made all state lands into four districts: agricultural, conservation, rural and urban. The Governor appointed members to a State Land Use Commission, whose duties were to uphold the Law and form the boundaries of the four districts. In addition to state zoning, the Land Use Law introduced a program of Differential Assessment, wherein agricultural landowners paid taxes on their land for its agricultural use value, rather than its market value.
- D. The Oregon Land Use Act of 1973: This act established the Land Conservation and Development Commission (LCDC) to provide statewide planning goals and guidelines.

Under this Act, Oregon cities and counties are each required to draw up a comprehensive plan, consistent with statewide planning goals. Agricultural land preservation is high on the list of state goals to be followed locally.

If the proposed site is subject to or has used one or more of the above farmland protection programs or policies, score the site 20 points. If none of the above policies or programs apply to this site, score 0 points.

5. How close is the site to an urban built-up area?

The site is 2 miles or more from an urban built-up area	15 points
The site is more than 1 mile but less than 2 miles from an urban built-up area	10 points
The site is less than 1 mile from, but is not adjacent to an urban built-up area	5 points
The site is adjacent to an urban built-up area	0 points

This factor is designed to evaluate the extent to which the proposed site is located next to an existing urban area. The urban built-up area must be 2500 population. The measurement from the built-up area should be made from the point at which the density is 30 structures per 40 acres and with no open or non-urban land existing between the major built-up areas and this point. Suburbs adjacent to cities or urban built-up areas should be considered as part of that urban area.

For greater accuracy, use the following chart to determine how much protection the site should receive according to its distance from an urban area. See chart below:

Distance From Perimeter of Site to Urban Area	Points
More than 10,560 feet	15
9,860 to 10,559 feet	14
9,160 to 9,859 feet	13
8,460 to 9,159 feet	12
7,760 to 8,459 feet	11
7,060 to 7,759 feet	10
6,360 to 7,059 feet	9
5,660 to 6,359 feet	8
4,960 to 5,659 feet	7
4,260 to 4,959 feet	6
3,560 to 4,259 feet	5
2,860 to 3,559 feet	4
2,160 to 2,859 feet	3
1,460 to 2,159 feet	2
760 to 1,459 feet	1
Less than 760 feet (adjacent)	0

6. How close is the site to water lines, sewer lines and/or other local facilities and services whose capacities and design would promote nonagricultural use?

None of the services exist nearer than 3 miles from the site	15 points
Some of the services exist more than one but less than 3 miles from the site	10 points
All of the services exist within 1/2 mile of the site	0 points

This question determines how much infrastructure (water, sewer, etc.) is in place which could facilitate nonagricultural development. The fewer facilities in place, the more difficult it is to develop an area. Thus, if a proposed site is further away from these services (more than 3 miles distance away), the site should be awarded the highest number of points (15). As the distance of the parcel of land to services decreases, the number of points awarded declines as well. So, when the site is equal to or further than 1 mile but less than 3 miles away from services, it should be given 10 points. Accordingly, if this distance is 1/2 mile to less than 1 mile, award 5 points; and if the distance from land to services is less than 1/2 mile, award 0 points.

Distance to public facilities should be measured from the perimeter of the parcel in question to the nearest site(s) where necessary facilities are located. If there is more than one distance (i.e. from site to water and from site to sewer), use the average distance (add all distances and then divide by the number of different distances to get the average).

Facilities which could promote nonagricultural use include:

- Water lines
- Sewer lines
- Power lines
- Gas lines
- Circulation (roads)
- Fire and police protection
- Schools

7. Is the farm unit(s) containing the site (before the project) as large as the average-size farming unit in the county? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage of Farm Units in Operation with \$1,000 or more in sales.)

As large or larger:	10 points
Below average: Deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more is below average	9 to 0 points

This factor is designed to determine how much protection the site should receive, according to its size in relation to the average size of farming units within the county. The larger the parcel of land, the more agricultural use value the land possesses, and vice versa. Thus, if the farm unit is as large or larger than the county average, it receives the maximum number of points (10). The smaller the parcel of land compared to the county average, the fewer number of points given. Please see below:

Parcel Size in Relation to Average County Size	Points
Same size or larger than average (100 percent)	10
95 percent of average	9
90 percent of average	8
85 percent of average	7
80 percent of average	6
75 percent of average	5
70 percent of average	4
65 percent of average	3
60 percent of average	2
55 percent of average	1
50 percent or below county average	0

State and local Natural Resources Conservation Service offices will have the average farm size information, provided by the latest available Census of Agriculture data

8. If this site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project	10 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project	9 to 1 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project	0 points

This factor tackles the question of how the proposed development will affect the rest of the land on the farm. The site which deserves the most protection from conversion will receive the greatest number of points, and vice versa. For example, if the project is small, such as an extension on a house, the rest of the agricultural land would remain farmable, and thus a lower number of points is given to the site. Whereas if a large-scale highway is planned, a greater portion of the land (not including the site) will become non-farmable, since access to the farmland will be blocked; and thus, the site should receive the highest number of points (10) as protection from conversion.

Conversion uses of the Site Which Would Make the Rest of the Land Non-Farmable by Interfering with Land Patterns

Conversions which make the rest of the property nonfarmable include any development which blocks accessibility to the rest of the site. Examples are highways, railroads, dams or development along the front of a site restricting access to the rest of the property.

The point scoring is as follows:

Amount of Land Not Including the Site Which Will Become Non-Farmable	Points
25 percent or greater	10
23 - 24 percent	9
21 - 22 percent	8
19 - 20 percent	7
17 - 18 percent	6
15 - 16 percent	5
13 - 14 percent	4
11 - 12 percent	3
9 - 11 percent	2
6 - 8 percent	1
5 percent or less	0

9. Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available	5 points
Some required services are available	4 to 1 point(s)
No required services are available	0 points

This factor is used to assess whether there are adequate support facilities, activities and industry to keep the farming business in business. The more support facilities available to the agricultural

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor-type site or design alternative for protection as farmland along with the land evaluation information.

For Water and Waste Programs, corridor analyses are not applicable for distribution or collection networks. Analyses are applicable for transmission or trunk lines where placement of the lines are flexible.

- (1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

- | | |
|--------------------------|----------------------|
| (2) More than 90 percent | (3) 15 points |
| (4) 90 to 20 percent | (5) 14 to 1 point(s) |
| (6) Less than 20 percent | (7) 0 points |

- (2) How much of the perimeter of the site borders on land in nonurban use?

- | | |
|--------------------------|-------------------|
| (3) More than 90 percent | (4) 10 point(s) |
| (5) 90 to 20 percent | (6) 9 to 1 points |
| (7) less than 20 percent | (8) 0 points |

- (3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

- | | |
|--------------------------|----------------------|
| (4) More than 90 percent | (5) 20 points |
| (6) 90 to 20 percent | (7) 19 to 1 point(s) |
| (8) Less than 20 percent | (9) 0 points |

- (4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

- | | |
|-----------------------|-----------|
| Site is protected | 20 points |
| Site is not protected | 0 points |

- (5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage of Farm Units in Operation with \$1,000 or more in sales.)

- | | |
|---|---------------|
| As large or larger | 10 points |
| Below average deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average | 9 to 0 points |

- (6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

- | | |
|--|------------------|
| Acreage equal to more than 25 percent of acres directly converted by the project | 25 points |
| Acreage equal to between 25 and 5 percent of the acres directly converted by the project | 1 to 24 point(s) |
| Acreage equal to less than 5 percent of the acres directly converted by the project | 0 points |

- (7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available	5 points
Some required services are available	4 to 1 point(s)
No required services are available	0 points

- (8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment	20 points
Moderate amount of on-farm investment	19 to 1 point(s)
No on-farm investment	0 points

- (9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted	25 points
Some reduction in demand for support services if the site is converted	1 to 24 point(s)
No significant reduction in demand for support services if the site is converted	0 points

- (10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland	10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland	9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland	0 points

landowner, the more feasible it is for him or her to stay in production. In addition, agricultural support facilities are compatible with farmland. This fact is important, because some land uses are not compatible; for example, development next to farmland can be dangerous to the welfare of the agricultural land, as a result of pressure from the neighbors who often do not appreciate the noise, smells and dust intrinsic to farmland. Thus, when all required agricultural support services are available, the maximum number of points (5) are awarded. When some services are available, 4 to 1 point(s) are awarded; and consequently, when no services are available, no points are given. See below:

Percent of Services Available	Points
100 percent	5
75 to 99 percent	4
50 to 74 percent	3
25 to 49 percent	2
1 to 24 percent	1
No services	0

10. Does the site have substantial and well-maintained on farm investments such as barns, other storage buildings, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment	20 points
Moderate amount of non-farm investment	19 to 1 point(s)
No on-farm investments	0 points

This factor assesses the quantity of agricultural facilities in place on the proposed site. If a significant agricultural infrastructure exists, the site should continue to be used for farming, and thus the parcel will receive the highest amount of points towards protection from conversion or development. If there is little on farm investment, the site will receive comparatively less protection. See below:

Amount of On-farm Investment	Points
As much or more than necessary to maintain production (100 percent)	20
95 to 99 percent	19
90 to 94 percent	18
85 to 89 percent	17
80 to 84 percent	16
75 to 79 percent	15
70 to 74 percent	14
65 to 69 percent	13
60 to 64 percent	12
55 to 59 percent	11
50 to 54 percent	10
45 to 49 percent	9
40 to 44 percent	8
35 to 39 percent	7
30 to 34 percent	6
25 to 29 percent	5
20 to 24 percent	4
15 to 19 percent	3
10 to 14 percent	2
5 to 9 percent	1
0 to 4 percent	0

11. Would the project at this site, by converting farmland to nonagricultural use, reduce the support for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted	10 points
Some reduction in demand for support services if the site is converted	9 to 1 point(s)
No significant reduction in demand for support services if the site is converted	0 points

This factor determines whether there are other agriculturally related activities, businesses or jobs dependent upon the working of the pre-converted site in order for the others to remain in production. The more people and farming activities relying upon this land, the more protection it should receive from conversion. Thus, if a substantial reduction in demand for support services were to occur as a result of conversions, the proposed site would receive a high score of 10; some reduction in demand would receive 9 to 1 point(s), and no significant reduction in demand would receive no points.

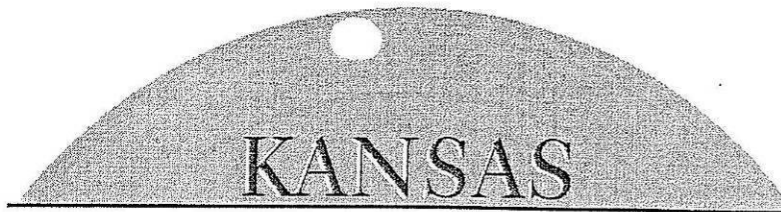
Specific points are outlined as follows:

Amount of Reduction in Support Services if Site is Converted to Nonagricultural Use	Points
Substantial reduction (100 percent)	10
90 to 99 percent	9
80 to 89 percent	8
70 to 79 percent	7
60 to 69 percent	6
50 to 59 percent	5
40 to 49 percent	4
30 to 39 percent	3
20 to 29 percent	2
10 to 19 percent	1
No significant reduction (0 to 9 percent)	0

12. Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of the surrounding farmland to nonagricultural use?

Proposed project is incompatible with existing agricultural use of surrounding farmland	10 points
Proposed project is tolerable of existing agricultural use of surrounding farmland	9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland	0 points

Factor 12 determines whether conversion of the proposed agricultural site will eventually cause the conversion of neighboring farmland as a result of incompatibility of use of the first with the latter. The more incompatible the proposed conversion is with agriculture, the more protection this site receives from conversion. Therefore, if the proposed conversion is incompatible with agriculture, the site receives 10 points. If the project is tolerable with agriculture, it receives 9 to 1 points; and if the proposed conversion is compatible with agriculture, it receives 0 points.



DEPARTMENT OF WILDLIFE & PARKS

KATHLEEN SEBELIUS, GOVERNOR

 SEP 27 2006
 date 9/27/06

September 26, 2006

Stephen Miller
 United States Department of Interior
 National Park Service
 Tallgrass Prairie National Preserve Office
 P.O. Box 585, 226 Broadway
 Cottonwood Falls, KS. 66845-0585

Dear Mr. Miller:

We have reviewed the most current material submitted and accompanied by your letter dated August 16, 2006; regarding a new visitor center and administrative facility proposed to be located south of the existing historic ranch headquarters on the west side of Kansas State Highway 177. The current action alternative being considered places the new facilities in a different location than originally proposed in the general management plan (GMP) submitted for our review in 2003.

It appears that the new location will involve the tributary to Fox Creek where Topeka Shiners were collected by our (National Park Service [NPS] and Kansas Department of Wildlife and Parks [KDWP]) cooperative sampling efforts in the recent past. Topeka Shiners are state and federally listed species and we note you have been in contact with Dan Mulhern of the United States Fish and Wildlife Service (USFWS) in Manhattan, Kansas.

Without more detailed plans, we are unable to make a thorough review of this proposal for the new location of the subject facilities at this time. However, we can offer some general comments from the information we have received.

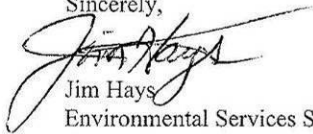
Construction activities around or involving the tributary may require an Action Permit from our department pursuant to K.S.A. 32-961 and K.A.R. 115-15-3 to meet requirements of the *Kansas Nongame and Endangered Species Act of 1975*. As more detailed plans are developed, we would anticipate working closely with you to avoid, minimize, or mitigate potential impacts from the project. As a general observation, locating the facilities some distance away from the tributary would likely reduce or eliminate the need for an Action Permit.

Pratt Operations Office
 512 SE 25th Ave., Pratt, KS 67124-8174
 Phone 620-672-5911 Fax 620-672-6020 www.kdwp.state.ks.us

In addition to communicating with KDWP and USFWS; we recommend contact with other state/federal agencies including: Kansas Department of Health and Environment for construction activity disturbing more than one acre, Kansas Department of Agriculture - Division of Water Resources for a stream obstruction permit (bridge crossing), State Historical Preservation Office for historical activity associated with the site; United States Army Corps of Engineers for any dredge/fill activity in or along a stream.

We look forward to working with you as the project moves ahead. Please provide more detailed plans as they become available, so we can offer a more thorough environmental evaluation for the project.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Hays", written over a horizontal line.

Jim Hays
Environmental Services Section Chief
Kansas Department of Wildlife and Parks

cc: Dan Mulhern, USFWS

August 16, 2006

D18 (TAPR)
xL7615
xN1619

Jim Hays
Kansas Department of Wildlife and Parks
Environmental Services Section
512 SE 25th Avenue
Pratt, Kansas 67124

Dear Mr. Hays:

Tallgrass Prairie National Preserve has restarted the process of preparing a site development plan and environmental assessment for future facilities. We informed your agency of the initial start of this process in a letter dated October 28, 2003. For your information, a copy of the U.S. Fish and Wildlife Service's most recent response regarding this matter is enclosed.

We consulted with your agency during the development of the general management plan (GMP) including our preparation of a related biological assessment (BA). The BA is enclosed for your reference.

The current action alternative being considered for future facilities would require amending the preserve's GMP to move the visitor information and orientation area. The new proposed location for the visitor center and administration facility is south of the historic ranch headquarters along the west side of Kansas State Highway 177 (NE/4 Sec. 6 T19S R8E). The new proposed location for the maintenance facilities is east of the Strong City Sewage Lagoons (NE/4 Sec. 17 T19S R8E). A map is enclosed showing the original location and the two new proposed locations.

The primary habitat includes go-back prairie and brome fields. Most of the area was previously disturbed by agricultural and ranch facilities development. The visitor center/administration area includes Topeka shiner habitat (tributary to Fox Creek). Topeka shiners have been collected by National Park Service and Kansas Department of Wildlife and Parks staff upstream. It is anticipated that development will be close but not occur directly in the stream area, however, the Topeka shiner habitat is within the proposed development area. The maintenance area does not include Topeka shiner habitat.

We would appreciate your input regarding the Topeka shiner and other species and habitat under your jurisdiction that may occur in these areas. Please contact our Natural Resources Program Manager, Kristen Hase, at 620-273-6034 if you have any questions or need additional information.

Sincerely,



Stephen T. Miller
Superintendent

Enclosures 3
bcc:
CNR
central files
chron files
reading file

STMiller:mem:8/15/2006

KSR&C No. 03-10-194 (3)

SEP - 1 2006

KANSAS

Kansas State Historical Society
Jennie Chinn, *Executive Director*

KATHLEEN SEBELIUS, GOVERNOR

August 28, 2006

Stephen T. Miller
Superintendent
Tallgrass Prairie National Preserve Office
P.O. Box 585, 226 Broadway
Cottonwood Falls, Kansas 66615-1099


Dear Mr. Miller:

In accordance with 36 CFR 800, the Kansas State Historic Preservation Office has reviewed plans (described in your letter dated August 17, 2006 and in Bruce Jones' attached report) for a new visitor center/administration complex and a new maintenance facility at the Tallgrass Prairie National Preserve in Chase County. In the area proposed for a new visitor center/administration complex, we concur with the recommendation that pre-construction investigations including remote sensing be carried out at the former location of a structure near Highway 177 visible in historic photographs. In the proposed maintenance facility area, we concur with the recommendation that an assessment of the historic significance of the extant post-1938 barn be undertaken should plans for its demolition be developed. Providing that these recommended activities be carried out, our office concludes that construction of the above referenced facilities will have no effect on historic properties as defined in 36 CFR 800.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Tim Weston at 785-272-8681 (ext. 214).

Sincerely,

Jennie Chinn, Executive Director and
State Historic Preservation Officer


Patrick Zollner
Deputy SHPO

6425 SW Sixth Avenue • Topeka, KS 66615-1099
Phone 785-272-8681 Ext. 205 • Fax 785-272-8682 • Email jchinn@kshs.org • TTY 785-272-8683
www.kshs.org

August 17, 2006

D18 (TAPR)
xH4217
xL7615

Patrick Zollner
Director, Cultural Resources Division
6425 SW Sixth Avenue
Topeka, Kansas 66615-1099

Dear Mr. Zollner:

Tallgrass Prairie National Preserve has restarted the process of preparing a site alternatives study and environmental assessment for future facilities. We informed you of the initial start of this process in a letter dated October 28, 2003. Your office's response, dated November 19, 2003, reference KSR&C#03-10-194, is enclosed.

The current action alternative being considered for future facilities would require amending the preserve's general management plan to move the visitor information and orientation area. The new proposed location for the visitor center and administration facilities is south of the historic ranch headquarters along the west side of Kansas State Highway 177 (NE/4 Sec. 6 T19S R8E). The new proposed location for the maintenance facility is east of the Strong City Sewage Lagoons (NE/4 Sec. 17 T19S R8E). A map is included showing the original location and the two new proposed locations.

Most of the area was previously disturbed by agricultural and ranch facilities development, and includes go-back prairie and brome fields. The area includes an unnamed tributary to Fox Creek. It is anticipated that development will be close but not occur directly in the stream area. In November 2005, Bruce Jones from the National Park Service Midwest Archeological Center conducted brief inventories that included these locations. A copy of his report is enclosed for your information.

We would appreciate any comments your office may have regarding this proposal. Please contact me at 620-273-6034 if you have any questions or need additional information.

Sincerely,



Stephen T. Miller
Superintendent

Enclosures 3

bcc:
Central files
chron files
reading file

STMILLER:mem:8/17/2006

See 11/29/03 (3)
Bob & Bruce provided
a copy. *[initials]*

NOV 20 2003

KANSAS

KSR&C No. 03-10-194

Kansas State Historical Society
Dick Pankratz, *Director, Cultural Resources Division*

KATHLEEN SEBELIUS, GOVERNOR

November 19, 2003

Stephen T. Miller
US Department of the Interior
National Park Service
Tallgrass Prairie National Preserve Office
P.O. Box 585
Cottonwood Falls, KS 66845-0585

RE: Tallgrass Prairie National Preserve Proposed Visitor Information and Orientation Area
Chase County

Dear Mr. Miller:

Thank you for providing the Kansas State Historic Preservation Office with information regarding the proposed construction of the Visitor Information and Orientation Area at the Tallgrass Prairie National Preserve. We have reviewed the park's General Management Plan and our cultural resources files in accordance with 36 CFR 800. Because the project area lies in an area of high archeological potential that has never undergone an archeological survey, we recommend the area be surveyed by a professional archeologist prior to beginning construction.

Additionally, two previously recorded archeological sites (14CS105 and 14CS113) lie within the general area identified for construction of the visitor center and associated facilities. If these sites lie within or adjacent to the area ultimately selected for construction, we recommend they be tested for eligibility for listing on the National Register of Historic Places prior to the onset of construction.

Please provide this office with two **unbound** copies of the report documenting the survey, its results, and recommendations for avoidance or further testing of archeological sites, if any.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Will Banks 785-272-8681 (ex. 214) or Jennifer Epperson (ex. 225). Please refer to the Kansas Review & Compliance number (KSR&C#) above on all future correspondence relating to this project.

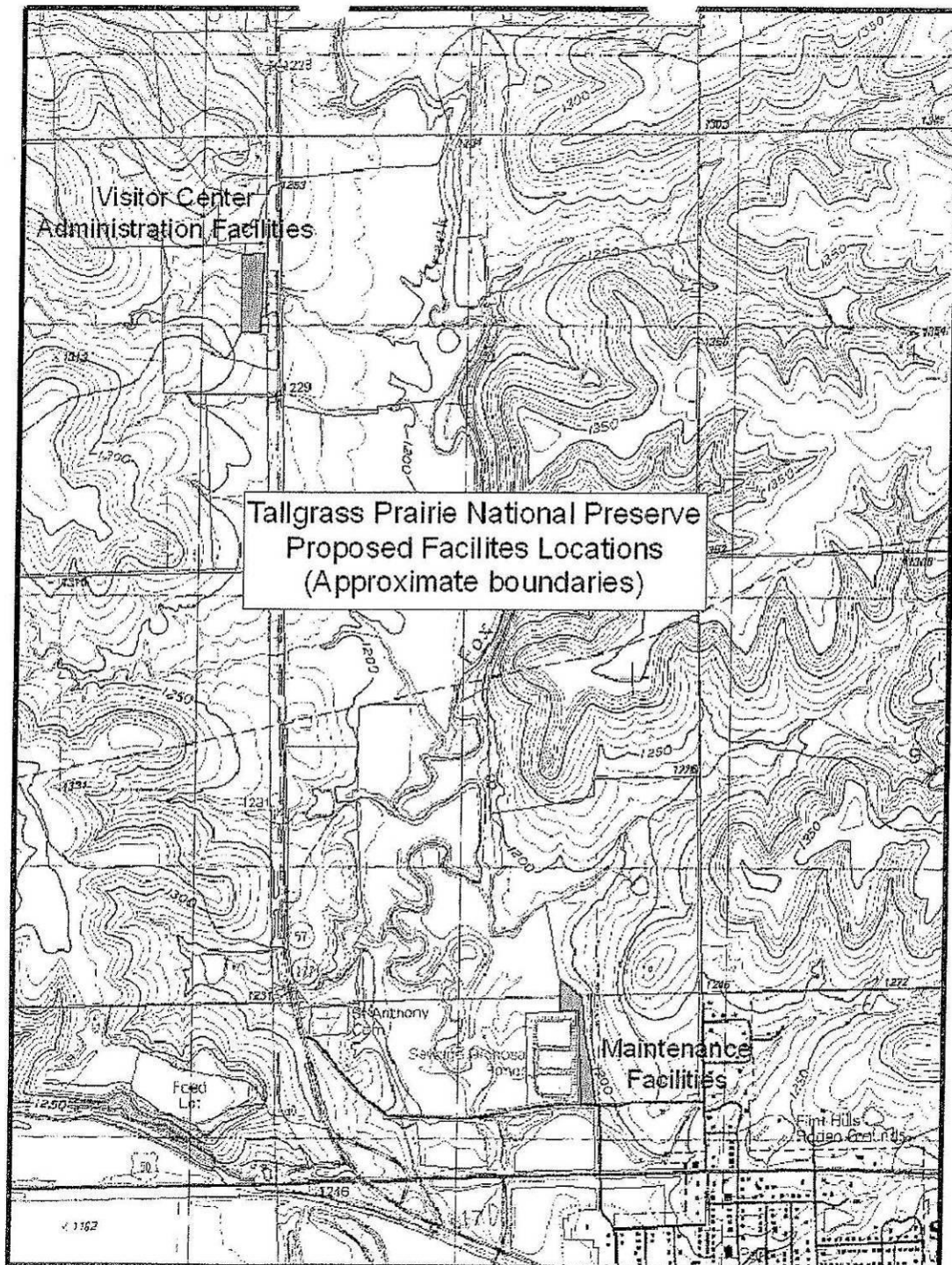
Sincerely,

Mary R. Allman
State Historic Preservation Officer

Richard Pankratz
Richard Pankratz, Director
Cultural Resources Division

RDP/jee

6425 SW Sixth Avenue • Topeka, KS 66615-1099
Phone 785-272-8681 Ext. 217 • Fax 785-272-8682 • Email dpankratz@ksbs.org • TTY 785-272-8683
www.ksbs.org





IN REPLY REFER TO:

A2624 (MWAC)

United States Department of the Interior

NATIONAL PARK SERVICE
Midwest Archeological Center
Federal Building, Room 474
100 Centennial Mall North
Lincoln, Nebraska 68508-3873

December 14, 2005

Memorandum

To: Manager, Midwest Archeological Center
From: Archeologist, Midwest Archeological Center
Subject: Travel to Tallgrass Prairie National Preserve, November 7-10, 2005

I traveled to Tallgrass at the request of Superintendent Steve Miller to conduct a series of small-scale investigations relating to present and future Preserve plans. These were as follows.

1) Replacement of soil in the basin of the former fountain in front of the main house at the Spring Hill Ranch headquarters. Preserve staff are replacing the soil in a flower bed that lies in the basin of a one-time fountain built during the Stephen Jones era at the Spring Hill Ranch. The fountain sits on an artificial terrace in front of the main ranch house. Illustrated in an 1883 lithograph of the ranch buildings, it is believed to have been supplied with water from an underground cistern a short distance uphill to the northwest (Jones 2002). The fountain superstructure is believed to have been dismantled in the 1940s, at which time the circular basin around the feature was filled with soil to support a flower bed. I had previously recommended that the soil be systematically removed and the basin of the fountain exposed to obtain further details of the feature.

Preserve maintenance worker Jim Whitton and I shoveled out 6-10 inches of soil fill in the basin, exposing a smooth-finished concrete floor ringed by low tabular limestone walls that were topped with six tooled limestone capstones, the latter forming a raised circular rim. The concrete floor of the basin measured 6 inches thick (Al O'Bright, personal communication, December 5, 2005) and pitched slightly to the center. The basin itself was roughly circular in plan view, and measured about 10½ feet in diameter north-south. At the approximate center of the basin lay a cylindrical depression or sump that measured 2½ feet in diameter and extended to a depth of 3 feet below the basin floor. The sump, probably formed in a separate pour prior to that of the basin floor (Al O'Bright, personal communication, December 5, 2005) had been intentionally filled with large, angular limestone rubble, presumably in the 1940s when the fountain was removed, but also contained seeping water and mud/soil from the overlying flower bed. A rusted one-

inch galvanized steel pipe rose diagonally from the bottom of the sump, and via a series of elbow joints, crossed the floor of the basin to rise again and terminate in a hose bib at the inner west side of the capstone ring.

Except for fragments of plastic plant markers, no artifactual material was observed or recovered from the soil in the fountain base. After the concrete floor of the basin had been exposed, I cleaned out much of the rock in the upper sump in order to obtain a depth measurement for the feature, but was unable to remove all of the water, limestone rubble, and mud in the bottom of the sump. Preserve Chief Interpreter Heather Brown will remove these materials as time permits in order to expose the floor of the sump and obtain details regarding how it was filled, etc. It is possible that the existing steel pipe that rises from the sump is connected to other fittings in the center sump floor that relate to the initial fountain function.

I concluded my part of this project by taking photographs of the excavated fountain base and sump and making measured drawings of the feature.

2) Examination of the standing privy and other possible privy locations behind the Lower Fox Creek School. The Lower Fox Creek School was built in 1882 on land donated by Stephen Jones a short distance north of the Spring Hill Ranch headquarters. The school, which is listed on the National Register of Historic Places, was closed in 1930, has burned once, been rebuilt, and undergone a number of other physical changes.

A short distance behind and to the west of the school house is a standing wooden privy with a cylindrical concrete pedestal base and single wooden seat, the construction date of which is unknown. Adjacent to the south of the standing privy lies the large rectangular concrete base of another privy, age and origin also unknown. Relative to preservation and maintenance issues, Preserve staff are interested in knowing the date of the standing privy's construction together with the locations of the original 1882 privies, which presumably stood in the same general area behind the school.

The standing privy, which is in need of roof repair, appears to have been built of dimensioned lumber and wire nail fasteners. The concrete floor of the feature and the concrete pedestal for the seat are smooth-finished and in excellent condition. By contrast, the isolated rectangular concrete privy base a short distance to the south was crudely board-formed in several small pours, and barbed wire reinforcement is visible in its sides.

A growing set of informant data variously suggests that a) the original school privies lay in the same general area at the back of the schoolyard, and were in fact capable of serving four children at one time; b) the original girls' privy stood to the south, the boys' to the north, and they served two children at once; c) the large rectangular concrete privy base was built by the Works Progress Administration as part of a program to upgrade public and/or school restrooms; d) the same base is in fact a boys' urinal; e) the standing privy was built by a local garden club; or f) it served a family which occupied the schoolhouse

in the 1930s following its abandonment as a school (Heather Brown, personal communication, November 10, 2005; Land and Community Associates 2004).

The locations of the original 1882 privies at the back of the schoolyard have not yet been identified. The land in question, a slope along a north-south wire fence and collapsed rock wall, is currently in sparse grass and sumac. However, upon close examination of the area, I could see no surface vegetation changes that might indicate where the original privy pits might once have been excavated, and though I made several passes just inside the fences with a steel probe, I found no soil changes or soft spots that would indicate subsurface privy fill. At this preliminary point, however, it should be noted that it is uncertain whether the original privies had subterranean pits or above ground chambers.

In my closeout with Superintendent Miller, I indicated that the standing privy had no structural elements or fasteners that indicated an 1882 construction date. However, the opinion of Historic Architect Al O'Bright regarding the age of the standing structure and its significance should preempt my own recommendations.

3) Archeological inventory for a new visitor center. I also undertook brief inventories at three alternative locations under consideration for construction of a visitor center and a new maintenance facility. At this early stage, it is uncertain whether the two facilities will be combined at one location or whether they will be built at separate sites.

The location now under consideration for a new visitor center lies a short distance south of the recently expanded parking lot at the Spring Hill Ranch headquarters on the west side of Kansas Highway 57/177. The location is likewise a short distance north of a small east-flowing stream that is tributary to Fox Creek. The area in question is currently in pasture, but has seen use for several decades in moving upland livestock through an underpass in the highway to pastures along Fox Creek.

A formal file search was requested from the Kansas State Historical Society on October 19, 2005, the results of which indicated that there were no previously recorded archeological sites in the immediate vicinity of the project location. The nearest recorded site, 14CS106, was that of the Spring Hill Ranch headquarters 200 m further to the north.

However, at the east edge of the area under consideration is the former site of at least one simple frame structure that dates to the George Davis period of ranch ownership (Orville Burtis, personal communication, December 8, 2005). This building, visible in an historic photograph taken from the barn at the Spring Hill Ranch complex, appears to have been single story and rectangular in shape with a simple gable roof; the photograph documents that the structure had four windows on its long northern side. The roof of a second small isolated structure, possibly a gas pump house, is also visible both in this photograph and perhaps in the 1938 aerial photograph of the area. Any remains of this structure would lie a few meters to the west along an old fence line..

The structure was reportedly moved by Burtis and Davis from the Gabe Frank Ranch (now the Merrill Ranch to the north of the Preserve), perhaps at the same time as the ranch hand house was moved to the back of the Spring Hill complex on the hill to the north. Ostensibly, the structure near the highway also served as a residence for ranch hands working on the Davis Ranch, but was eventually torn down, probably in the late 1980s.

The site of the structure now lies within a rectangular outline of mature trees immediately west of the state highway and a short distance south of the Preserve parking lot. While I walked the area enclosed by the trees, I did not observe clear evidence of former structure locations, etc. However, subsurface features and artifacts relating to the occupation may still be present, as may be the small adjacent structure visible in the photographs.

This location has not yet been assigned a Kansas archeological site number. However, given the fact that it was moved to the Davis Ranch from its original location elsewhere, the site does not appear to be significant relative to the larger ranch history at Tallgrass, and by itself does not appear to be eligible for nomination to the National Register of Historic Places. Should this general location be selected for construction of a visitor center, limited preconstruction investigations including remote sensing should be undertaken to confirm that no other more significant historic archeological materials or features are present.

4) Archeological inventory of three locations for a stand-alone maintenance facility.
Three different locations are currently under consideration for construction of a new stand-alone maintenance facility.

a) The first alternative is an elongated site that lies immediately north of a corrugated steel storage barn at the extreme south end of the Preserve. Situated a few meters north of an east-west county gravel road, the location extends along a slope overlooking the east floodplain and terraces of Fox Creek. The site is bounded uphill to the east by a line of trees and a dry-laid stone wall, and downhill to the west by a complex of sewage lagoons that serve nearby Strong City. The site covers approximately 6 acres north and south, and is quite narrow.

This location is presently in dense brome grass, and ground surface visibility is poor. No other historic features were observed in the area save the low stone fence along the east side of the site, and the barn at its south end. The former probably dates to the late 19th century; while the barn post-dates the 1938 aerial photographs of the area. A file search by the Kansas State Historical Society indicated that no recorded archeological sites were present in the immediate area of the location, although 14CS105, a lithic scatter, was identified in 1998 600 meters to the west across Fox Creek (Jones 1999), and 14CS124, a prehistoric/historic site, was recorded 450 meters to the southwest in 2003 (Jones 2005).

I excavated a pair of shovel tests at a 20-m interval along a north-trending transect and roughly 25 m west of the stone wall alignment. To a depth of roughly 40 cm below the

surface, the soil was a homogenous dark clay loam with light gravel. No contact was reached with lower soil horizons, and no archeological materials were identified to indicate the presence of a prehistoric component in the area.

It is unclear whether construction of the sewage lagoons affected this location, although preliminary indications are that such disturbance did not occur. However, the previously mentioned 1938 aerials illustrate a buried meander scar of Fox Creek immediately adjacent to or actually within the elongated project area, and the stream almost certainly would have eroded away any prehistoric or historic occupations save those of perhaps the last one to two centuries.

It is likely that the post-1938 barn would remain standing should this alternative site be selected for construction of a new maintenance facility, but should such not be the case, a Determination of Eligibility should be sought from the Kansas State Historic Preservation Officer regarding its significance. Based upon the above geomorphological considerations, it is unlikely that implementation of construction at this location would adversely affect significant unrecorded subsurface archeological resources, and no further investigations are recommended.

b) The second possible maintenance facility location lies at the east end of a 14-acre field immediately east of Kansas Highway 57/77 and a short distance northeast of the Spring Hill Ranch headquarters. This location is positioned atop an alluvial fan that has formed at the mouth of a right or west bank tributary to Fox Creek, and that larger stream is actively cutting into the toe of the feature at the eastern edge of the field. Although the field has been under cultivation at least since 1938 (documented on the earliest aerial photographs of the area), it has been fallow for some time. Ground cover atop the fan, which now consists of thick, high grass and weeds, greatly reduces ground surface visibility. A ledge of the Cottonwood Limestone outcrops along the banks of the tributary stream at the south edge of the fan, but soils atop the highest point in the center of the fan may still be up to 5-6 ft thick. The uppermost soil consists of a very dark clay loam containing little to no gravel.

A file search by the Kansas State Historical Society indicated that no previously recorded archeological sites lay in the immediate vicinity of this location. However, two historic sites, 14CS106 (the Spring Hill Ranch headquarters), and 14CS112 (the Lower Fox Creek School), lay a short distance to the west across Kansas Highway 57/177 (Jones 1999), and 14CS109, a prehistoric lithic scatter, had been recorded along Fox Creek 600 meters further to the southeast (Jones 1999).

Limited shovel testing was undertaken along a single north-south transect aligned across the crest of the fan. Nine tests were excavated along and on either side of the alignment at approximate 10-12 m intervals, and were routinely excavated to depths of 35-40 cm below the present ground surface. Four additional tests were subsequently excavated around a positive shovel test (ST 7) on the highest point on the crest of the fan and roughly 75 m west of the east edge of the field. The 13 tests produced a pair of

unmodified chert flakes, the larger of which has been derived from a stream cobble of tan chert, probably collected from the nearby Fox Creek streambed. The second, smaller, flake, a fragment, represents the typical Florence B type grey chert quarried by prehistoric populations at numerous locations throughout the Flint Hills.

The location that produced the flakes has been officially designated 14CS125. Neither of the recovered artifacts is diagnostic of a particular prehistoric time period or cultural manifestation, and an age for the lithic scatter cannot now be determined. However, the fan deposits are likely to contain more artifactual materials, some of which should be time- or culture-sensitive, as well as other intact subsurface features. Should this location ultimately be selected as the construction site, additional archeological investigations will be warranted in order to generate information relating to the horizontal distribution and significance of the materials at 14CS125 relative to National Register of Historic Places eligibility.

c) The final site under consideration for a new maintenance facility lies immediately west of Kansas Highway 57/177 and a short distance south of the small tributary stream which bounds the location examined for a new visitor center. This area has undergone considerable historic use as documented in multiple aerial photographs beginning in 1938. Currently visible features include a large standing mineral chute, a two-track access road that leads west into the pastures, and three concrete grain bin bases a few meters to the south of the two-track.

Based upon aerial photographs and informant information (Orville Burtis, personal communication, December 8, 2005), this general area is believed to be the site of the former home of Curt and Edith Benninghoven, a son and daughter-in-law of Otto and Flora Benninghoven, who purchased and operated part of the former Spring Hill Ranch following its sale by Charles Patten in 1909. Flora Benninghoven lived in the main ranch house on the hill to the north after she had acquired title to the land in 1917. The Curt and Edith Benninghoven house was reportedly built in the mid-1930s, and lay in the immediate vicinity of a grove of mature trees that presently stand just north and west of the access road intersection with Kansas Highway 57/177.

Curt Benninghoven directed the larger ranch operation following his father's death, and was a prominent figure in the local community. His wife was active in the county extension program, and had considerable success raising turkeys. The Benninghovens lost their ranch due to financial difficulties in 1935. However, Curt continued to work for the subsequent owner, George H. Davis, during which time Curt and his wife continued to live in their home south of the main ranch. It is not known when the structures—the house and presumably several outbuildings—were removed.

The Benninghoven home site has as yet not been awarded a formal Kansas archeological site number. Since the Benninghoven ownership and time period are important factors in the complex history of the Preserve, the area of the main ranch house, presently adjacent to the large trees, should be completely avoided by any construction activities. Should it

be impossible to avoid the Benninghoven site, the location will warrant extensive archaeological testing and evaluation to enable a formal Determination of Eligibility to be made vis à vis the site's nomination to the National Register of Historic Places.

Following a brief reexamination of aerial photographs and a closeout session with Superintendent Miller, I left Tallgrass the morning of November 10, arriving back in Lincoln in the early afternoon.

References Cited

Land and Community Associates

2004 Tallgrass Prairie National Preserve Cultural Landscape Report. Prepared for Midwest Regional Office, National Park Service, Omaha, Nebraska

Jones, Bruce A.

1999 Archeological Overview and Assessment for Tallgrass Prairie National Preserve, Chase County, Kansas. Midwest Archeological Center Technical Report No. 61. Lincoln, Nebraska.

2005 Archeological Construction Monitoring for the Water and Fire Suppression Systems, Tallgrass Prairie National Preserve, Chase County, Kansas. Draft manuscript on file, Midwest Archeological Center, Lincoln, Nebraska.



Bruce A. Jones

Cleared for distribution:



Manager, Midwest Archeological Center

12/14/05
Date

cc: | Supt., TAPR
Robert King, TAPR
Tom Thiessen, MWAC

SEP - 5 2006

KANSAS

DEPARTMENT OF AGRICULTURE
ADRIAN J. POLANSKY, SECRETARY

KATHLEEN SEBELIUS, GOVERNOR

September 1, 2006

US DEPARTMENT OF THE INTERIOR
TALLGRASS PRAIRIE NATIONAL PRESERVE OFFICE
STEPHEN MILLER
PO BOX 585
COTTONWOOD FALLS KS 66845-0585

RE: DWR A-95 2006.251

Dear Mr. Miller:

This will acknowledge receipt of your letter and attachments dated August 16, 2006 regarding the future facilities at the Tallgrass Prairie National Preserve.

The comments that were provided in our letter dated November 25, 2003 still apply to the newly proposed locations for the visitor center and administrative facilities.

If you have questions regarding water structures or believe that a water structures permit has already been applied for or obtained, please contact Jean Darrah at (785) 296-2855.

Sincerely,



Bob Lytle
Environmental Scientist
Technical Services Section

RFL:ssc
pc: Topeka Field Office

Division of Water Resources David L. Pope, Chief Engineer
109 SW 9th ST., 2nd Floor Topeka, KS 66612-1283
Voice (785) 296-3717 Fax (785) 296-1176 <http://www.accesskansas.org/kda>

August 16, 2006

D18 (TAPR)
xL7615
xN3043

David L. Pope, Chief Engineer
Division of Water Resources
Kansas Department of Agriculture
109 SW 9th Street, 2nd Floor
Topeka, Kansas 66612-1283

Dear Mr. Pope:

Tallgrass Prairie National Preserve has restarted the process of preparing a site alternatives study and environmental assessment for future facilities. We informed you of the initial start of this process in a letter dated October 28, 2003. Your office's response, dated November 25, 2003, is enclosed.

The current action alternative being considered for future facilities would require amending the preserve's general management plan to move the visitor information and orientation area. The new proposed location for the visitor center and administration facilities is south of the historic ranch headquarters along the west side of Kansas State Highway 177 (NE/4 Sec. 6 T19S R8E). The new proposed location for the maintenance facility is east of the Strong City Sewage Lagoons (NE/4 Sec. 17 T19S R8E). A map is enclosed showing the original location and the two new proposed locations.

Most of the area was previously disturbed by agricultural and ranch facilities development, and includes go-back prairie and brome fields. Surface water resources include an unnamed tributary to Fox Creek. It is anticipated that development will be close but not occur directly in the stream area.

We would appreciate any additional input your office may have regarding water resources in the proposed areas. Please contact our Natural Resources Program Manager, Kristen Hase, at 620-273-6034 if you have any questions or need additional information.

Sincerely,



Stephen T. Miller
Superintendent

Enclosures 2

bcc:
CNR
central files
chron files
reading file

STMiller:mem:8/16/2006

B 11/26/03

(7)

NOV 26 2003



KANSAS

DEPARTMENT OF AGRICULTURE
ADRIAN J. POLANSKY, SECRETARY

KATHLEEN SEBELIUS, GOVERNOR

November 25, 2003

STEPHEN T. MILLER
TALLGRASS PRAIRIE PRESERVE OFFICE
P.O. BOX 585, 226 BROADWAY
COTTONWOOD FALLS, KS 66845-0585

RE: DWR A-95 2003.326

Dear Sir:

This will acknowledge receipt of your letter and attachments dated October 28, 2003 regarding a site development plan and environmental assessment for future facilities at the Preserve.

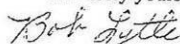
If the proposed project includes the construction of any facility, levee, floodplain fill, or other structure which controls, regulates or changes the flood waters of a stream or watercourse in this state, it will be subject to the provisions of K.S.A. 24-126 or 24-105, both of which require plans for the project to be approved by the Chief Engineer of the Division of Water Resources prior to construction.

If the proposed project includes the construction of a dam, or if it in any way changes or diminishes the course, current or cross section of a stream or watercourse in this state, it is subject to the provisions of K.S.A. 82a-301 to 305a, which requires the issuance of a permit and approved by the Chief Engineer prior to construction.

The project may require approval from the local community if it is located in an identified Special Flood Hazard Area (floodplain) and the community participates in the National Flood Insurance Program. If the project involves repair of damages or renovation and rehabilitation of structures, and the costs of the repair or renovation exceed 50 percent of the market value of a structure before the damage occurred or the renovation starts, the lowest floor of the repaired or renovated structure may need to be elevated above the base (one percent chance) flood level. If the elevation is accomplished by the placement of fill material in the floodplain, approval of plans for the placement of the fill material may be required from this office. Approval from our office also involves environmental review by other state agencies.

If you have questions regarding water structures, please contact Jean Darrah at (785) 296-2855.

Sincerely yours,



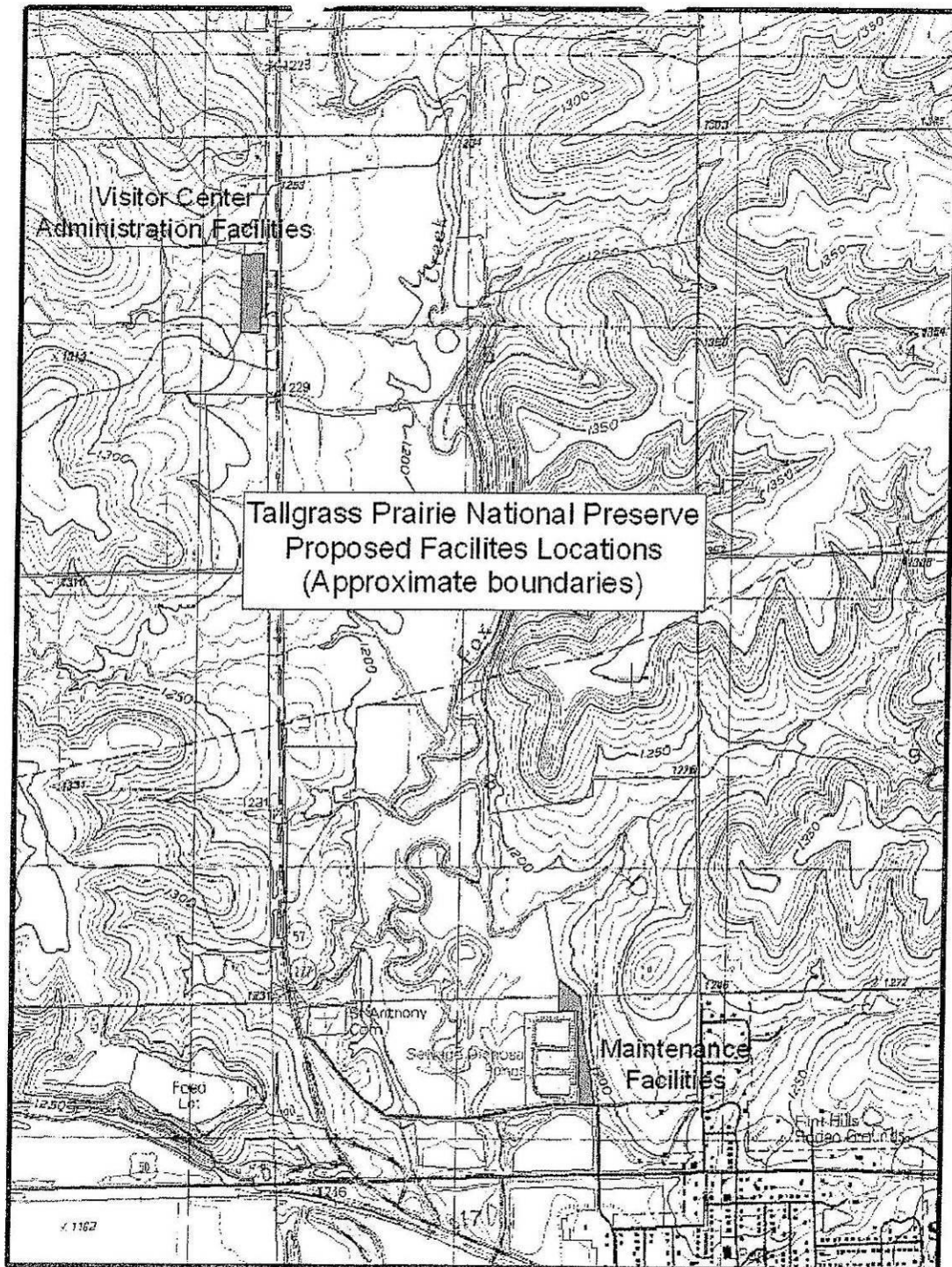
Bob Lytle
Environmental Scientist
Technical Services Section

RFL:ssc

pc: Topeka Field Office, Iona Branscum Water Commissioner

Division of Water Resources David L. Pope, Chief Engineer
109 SW 9th ST., 2nd Floor Topeka, KS 66612-1283

Voice (785) 296-3717 Fax (785) 296-1176 <http://www.accesskansas.org/kda>





Kansas Chapter
700 SW Jackson Street, Suite 804
Topeka, KS 66603

tel [785] 233-4400
fax [785] 233-2022
nature.org/kansas

FEB 13 2007

Tallgrass Prairie National Preserve
Steve Miller, Superintendent
P.O. Box 585
Cottonwood Falls, KS 66845

February 9, 2007

Dear Superintendent Miller:

I have reviewed the Site Alternatives Study for the proposed Visitor Center, Administrative and Maintenance Facilities at the Tallgrass Prairie National Preserve. I have also reviewed the comments submitted by staff of The Nature Conservancy in Kansas and trust they have proven useful.

As you know, we have consistently expressed a strong reservation about alternatives that would involve any more than de minimis destruction of native prairie. To do otherwise would send an inconsistent message to landowners in the greater Flint Hills landscape that we hope to engage in long term preservation through the use of conservation easements.

We also want to emphasize that we remain hopeful that the design guidelines itemized in Appendix D can be followed to the greatest degree feasible. We look forward to working with the National Park Service during the design process to identify options that enhance the public's experience while causing the least possible impacts to the important natural and cultural resources at the chosen site.

The official position of The Nature Conservancy in Kansas on the proposed visitor center site is as follows:

- 1.) We trust the National Park Service, its professional staff, and its scoping process to produce the best available option for future facilities locations.
- 2.) When the planning process is completed and construction funding has been secured, we anticipate a prompt and orderly donation of the necessary land from The Nature Conservancy to the National Park Service.

In closing I would like to note that the unique partnership that exists between The Nature Conservancy and the National Park Service at the Tallgrass Prairie National Preserve brings with it, likewise, a unique set of challenges. The fact that this partnership continues to work well has much to do with the attitude of cooperation and courtesy that you have always fostered and modeled for both organizations. I look forward to working with you on this exciting phase in the history of the Tallgrass Prairie National Preserve.

Sincerely,

Alan J. Pollom, Vice President
The Nature Conservancy

Cc. Sandra Washington, NPS

August 17, 2006

D18 (TAPR)
xD30
xL7615

Donald C. Drickey, P.E.
District Engineer
Kansas Department of Transportation
District Two
1006 North Third, P.O. Box 857
Salina, Kansas 67402-0857

Dear Mr. Drickey:

Tallgrass Prairie National Preserve has restarted the process of preparing a site alternatives study and environmental assessment for future facilities. We informed you of the initial start of this process in a letter dated October 28, 2003.

The current action alternative being considered for future facilities would require amending the preserve's general management plan to move the visitor information and orientation area. The new proposed location for the visitor center and administration facilities is south of the historic ranch headquarters along the west side of Kansas State Highway 177 (NE/4 Sec. 6 T19S R8E). The new proposed location for the maintenance facility is east of the Strong City Sewage Lagoons (NE/4 Sec. 17 T19S R8E) on county road 227. A map is enclosed showing the original location and the two new proposed locations.

Most of the area was previously disturbed by agricultural and ranch facilities development, and includes go-back prairie and brome fields. The area includes an unnamed tributary to Fox Creek. It is anticipated that development will be close but not occur directly in the stream area.

We would appreciate any comments your office may have regarding this proposal. Please contact me at 620-273-6034 if you have any questions or need additional information.

Sincerely,

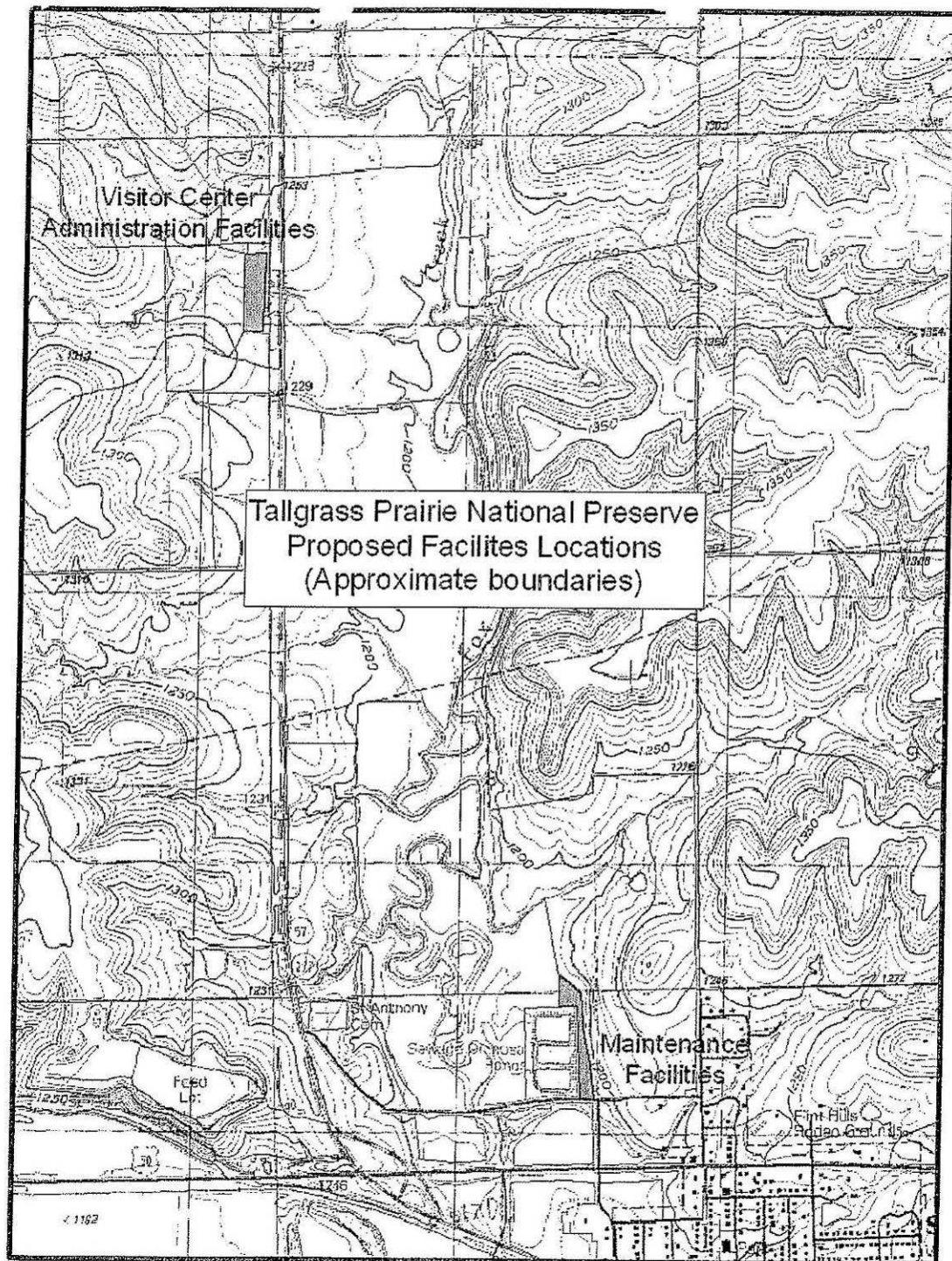


Stephen T. Miller
Superintendent

Enclosures 1

bcc:
central files
chron files
reading file

STMiller:mem:8/17/2006



Appendix C

NOV-21-2003 15:29

TALLGRASS PRAIRIE NPRES

P.19/26

NOV 17 2003

to 11/17/03

copy provided to Paul



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Kansas Field Office
315 Houston Street, Suite E
Manhattan, Kansas 66502-6172

November 12, 2003

Stephen T. Miller
Superintendent
National Park Service
Tallgrass Prairie National Preserve
P.O. Box 585, 226 Broadway
Cottonwood Falls, Kansas 66845

Dear Mr. Miller:

This is in response to your October 28, 2003 letter announcing the Park Service's process of preparing a site development plan and environmental assessment for future facilities development. Plans include a visitor information and orientation area with visitor and administrative facilities. Our principle interests in this development are the protection of federal trust resources, including threatened and endangered species, migratory birds, and wetlands.

As you are already aware, the endangered Topeka shiner (*Notropis topeka*) has been confirmed as occurring in streams on the Preserve. Two unnamed right bank tributaries to Fox Creek are known to contain this endangered fish, as is an unnamed left bank direct tributary to the Cottonwood River. Impacts to these areas, including increased runoff or significant alterations to the watershed areas, should be avoided if at all possible. You have already indicated in your General Management Plan a desire to minimize impacts on the prairie resource for which the Preserve was dedicated, which will help minimize impacts on grassland nesting birds, some of which are experiencing sharp population declines in recent years. In this predominantly prairie setting, wetlands are generally associated with streams and artificial impoundments. However, a more site-specific assessment should be conducted prior to final selection of a particular site for development. If wetland habitats may be impacted, a permit may be required from the U.S. Army Corps of Engineers.

If you have any further questions regarding any of these comments, please contact this office again. Thank you for providing us this opportunity for coordination.

Sincerely,

William H. Gill
Field Supervisor

139

NOV-21-2003 15:30

TALLGRASS PRAIRIE NPRES

P.21/26



K A N S A S

RODERICK L. BREMBY, SECRETARY

DEPARTMENT OF HEALTH AND ENVIRONMENT

KATHLEEN SEBELIUS, GOVERNOR

The following list of Leaking Underground Storage Tank projects are printed from the Agency's database of Underground and Aboveground storage tank facilities that have been assessed. The information contained in this printout is for informational purposes only and does not necessarily represent the current condition of the property.

If the receiver of this information would like to view specific documents in these files, please contact Kristie Ohlemeier at (785) 296-1678 or provide a written request by mail or fax at (785) 296-6190.

DIVISION OF ENVIRONMENT
Bureau of Environmental Remediation
CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE 410, TOPEKA, KS 66612-1387
Phone 785-296-1678 Fax 785-296-6190 <http://www.kdhe.state.ks.us/ber/index.html>
Printed on Recycled Paper

Appendix C

NOV-21-2003 15:30

TALLGRASS PRAIRIE NPRES

P.23/26



NOV 18 2003

K A N S A S

RODERICK L. BREMBY, SECRETARY

DEPARTMENT OF HEALTH AND ENVIRONMENT

KATHLEEN SEBELIUS, GOVERNOR

MEMORANDUM

DATE: November 4, 2003

TO: Donna Fisher, Receptionist - DOE Director's Office

FROM: Donald Carlson - BOW

SUBJECT: Agency Review Comments
Tallgrass Prairie National Preserve - Cottonwood Falls

I offer the following comments for review and consideration:

- As of January 9, 2003, the owner or operator (the party responsible for the project) of any construction activity which disturbs 1 acre or more is required to file a National Pollutant Discharge Elimination System (NPDES) permit application for stormwater runoff resulting from construction activities. The project owner (the party responsible for the project) must obtain authorization from KDHE to discharge stormwater runoff associated with construction activities prior to commencing construction. The Kansas construction stormwater general permit, a Notice of Intent (application form), a frequently asked questions file and supplemental materials are on-line on the KDHE Stormwater Program webpage at www.kdhe.state.ks.us/stormwater. Any additional questions or further information regarding construction stormwater permitting requirements should be directed to Alan Brooks at (785) 296-5549.
- Wastewater generated by the facility which is not directed to a City sanitary sewer may require the issuance of a State Water Pollution Control Permit. To obtain information regarding the need for a permit or to obtain the appropriate application forms, please contact Donald Carlson at (785) 296-5547 or Joe Mester at (785) 296-6804.
- If you will utilize a private water well to supply drinking water for the proposed facility, and the facility will serve 25 people or more per day, you need to contact Dave Waldo.

DIVISION OF ENVIRONMENT
Bureau of Water - Industrial Programs Section
CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE 420, TOPEKA, KS 66612-1367
Voice 785-296-5545 Fax 785-296-0088 <http://www.kdhe.state.ks.us>

143

Appendix C

NOV-21-2003 15:31

TALLGRASS PRAIRIE NPRES

P.25/26

*Bob & Bruce provided
a copy to*

NOV 20 2003

KANSAS

KSR&C No. 03-10-194

Kansas State Historical Society
Dick Pankratz, Director, Cultural Resources Division

KATHLEEN SEBELIUS, GOVERNOR

November 19, 2003

Stephen T. Miller
US Department of the Interior
National Park Service
Tallgrass Prairie National Preserve Office
P.O. Box 585
Cottonwood Falls, KS 66845-0585

RE: Tallgrass Prairie National Preserve Proposed Visitor Information and Orientation Area
Chase County

Dear Mr. Miller:

Thank you for providing the Kansas State Historic Preservation Office with information regarding the proposed construction of the Visitor Information and Orientation Area at the Tallgrass Prairie National Preserve. We have reviewed the park's General Management Plan and our cultural resources files in accordance with 36 CFR 800. Because the project area lies in an area of high archeological potential that has never undergone an archeological survey, we recommend the area be surveyed by a professional archeologist prior to beginning construction.

Additionally, two previously recorded archeological sites (14CS105 and 14CS113) lie within the general area identified for construction of the visitor center and associated facilities. If these sites lie within or adjacent to the area ultimately selected for construction, we recommend they be tested for eligibility for listing on the National Register of Historic Places prior to the onset of construction.

Please provide this office with two unbound copies of the report documenting the survey, its results, and recommendations for avoidance or further testing of archeological sites, if any.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Will Banks 785-272-8681 (ex. 214) or Jennifer Epperson (ex. 225). Please refer to the Kansas Review & Compliance number (KSR&C#) above on all future correspondence relating to this project.

Sincerely,

Mary R. Allman
State Historic Preservation Officer

Richard Pankratz
Richard Pankratz, Director
Cultural Resources Division

RDP/je

6425 SW Sixth Avenue • Topeka, KS 66615-1099
Phone 785-272-8681 Ext. 217 • Fax 785-272-8682 • Email dpankratz@ksbts.org • TTY 785-272-8683
www.ksbts.org

APPENDIX B
SPACE MODEL DETAILS

APR-13-2006 14:42

NPS/MWRO 2ND FLOOR

402 661 1982 P.02

NPS Facility Planning Model Report

NOTE: Nothing in this report should be published as an Official Report of the NPS Facility Planning Model without Approval by the Office of Construction Program Management

Identification:

Project Title: TAPR Admin-March 2006
 Model: Administration Facility
 Type of Project: New Construction
 PMIS Number:
 Region: MWR
 Park Name: Tallgrass Prairie NP
 Your Name: Robert H. King
 Job Title: Facility Manager
 Park Suggested GSF:
 Concurred by (Region):
 Recommended by (WASO, CPM):
 Approved by (DAB):
 Created Date: 3/22/2006 3:37:50 PM
 Modified Date: 4/13/2006 2:38:57 PM
 Calculator Mode: Custom Calculator

Comments on this report:

Existing admin office is in GSA leased building in Cottonwood Falls, KS. Staff would include NPS division chiefs, law enforcement, interpretations staff, and The Nature Conservancy manager. Utilities to be extended from VC site. Additional \$ for facility design to fit with the historic scene.

All Modifications Subject To Approval**Drivers:**

Total NPS Staff 18

Benchmark Calculations:

Drivers:	Standard Database Calculations
Office and Support Spaces (NSF)	3,200
Building Support	377
Tare at 30% (nearest 100)	1,500
Building (GSF, nearest 100)	5,100
Recommended:	
Area Per Person in Office Spaces (N/E)	178

NPS Park Specific Calculations:**Administration Facility Model Calculations**

Office and Support Spaces (NSF)	3,225
Building Support	377
Tare at 30% (nearest 100)	1,500
Building (GSF, nearest 100)	5,100
Site (Acres)	0.80
Site Access / Utility Extensions (Cost)	\$50,000
Total Net Construction Cost (Not Calculated)	
Area Per Person in Office Spaces:	
Recommended	178
Actual	179

Estimated Square Footage Report:

Room Description

Persons

Spaces or Units

Park Modified Spaces
with Standard Drivers

APR-13-2006 14:42

NPS/MWRD 2ND FLOOR

402 661 1982 P.03

Core Administration Functions			
General Administration Staff Offices	13	1	1,300
Superintendent / Supervisor Offices	5	1	600
Conference Room	18	1	350
General Storage	1	1	327
Staff Restrooms	18	2	215
Library Space	0	1	205
File / Mail / Copy Room	0	1	150
Lobby	18	1	120
Secured Storage	0	1	80
Break Room	9	1	50
Recycle Bins	0	1	40
Staff Showers	0	1	35
Staff Lockers	0	1	7
Core: Net Assignable			
Tare at 30%			3,479
Gross Square Feet			1,491
			4,970
Administration Facility Additional Functions			
Evidence Room	0	1	50
Drafting/Flat Files	0	2	49
Armory	0	1	24
Additional Functions: Net Assignable			
Tare at 30%			123
Gross Square Feet			53
			176
Subtotal: Building Area			
Buildings: Net Assignable			3,602
Gross Square Feet (rounded to 100)			5,100
Exterior Requirements			
Building			5,100
Parking	0	26	8,580
Patio	18	1	270
Site: Net Assignable			
Tare + Site Constraints			13,950
Site GSF (rounded to 100)			19,530
Site Acres			33,500
			0.80
Site Access			
Site Access (Miles), new, paved			0
Utilities			
Utility Extensions (Linear Feet)			500
Physical and Environmental Constraints			
Environmental			1.12
Soils			1.25
Slope			1.00
Archaeology			1.00

Definitions:

GSF- Gross Square Feet
NASF- Net Assignable Square Feet

2

APR-13-2006 14:42

NPS/MWRD 2ND FLOOR

402 661 1982 P.04

NSF - Net Square Feet

NSF - Net Square Feet

NTE - Not to exceed

Tare (for buildings)- Corridors, walls, mechanical, electrical, vertical shafts, vertical circulation, janitor closets, etc.

Additional Responses:*Staff Location Issues*

Reviewed location at historic site buildings and maintenance facility at historic site, and GSA leased building in Cottonwood Falls, KS

Unusual Functions Noted by Facility Calculator

Exceeds area for Office spaces.

Justification of Unusual Functions

Evidence room for securing evidence seized by law enforcement rangers. Storage of government firearms and ammunition. Receiving and temporary storage of museum collection items. Documents and archival records. Care and treatment of park visitors and employees needing first aid.

Environmental Costs

Cultural Landscape Issues Cost \$125,000

APR-13-2006 14:42

NPS/MWRD 2ND FLOOR

402 661 1982 P.05

NPS Facility Planning Model Report

NOTE: Nothing in this report should be published as an Official Report of the NPS Facility Planning Model without Approval by the Office of Construction Program Management

Identification:

Project Title: TAPR Maint-March 2006
Model: Maintenance Facility
Type of Project: New Construction
PMIS Number:
Region: MWR
Park Name: Tallgrass Prairie NP
Your Name: Robert H. King
Job Title: Facility Manager
Park Suggested GSF:
Concurred by (Region):
Recommended by (WASO, CPM):
Approved by (DAB):
Created Date: 3/22/2006 1:59:30 PM
Modified Date: 4/13/2006 2:39:25 PM
Calculator Mode: Custom Calculator

Comments on this report:

This location is also planned for the motorpool parking of employees personal vehicles that will be driving government vehicles to the Visitor Center and Admin. buildings. This will reduce the amount of parking required in the area of the historic site and the visual intrusion of parked vehicles. Anticipate that 3-5 government vehicles would be driven from maintenance to the Visitor Center on a daily basis.

All Modifications Subject To Approval

Drivers:

Total Staff	16
Total Vehicles Maintained	15
Total Vehicles Stored	28

Benchmark Calculation:

Benchmark Gross SF Per Employee	680-800
Actual SF Per Employee	1131

NPS Park Specific Calculations:

	NASE	GSF	NASE % Total
Centralized Warehouse	3,000	4,000	22.2%
Other Functions (Storage)	2,050	2,733	15.2%
General Storage	1,600	2,133	11.9%
Maintenance of Park Grounds (Work Areas)	1,400	1,867	10.4%
Vehicle Maintenance (Repair)	1,350	1,800	10.0%
Maintenance of Park Buildings (Carpentry)	1,300	1,733	9.6%
Maintenance of Park Buildings (Other Work Areas)	890	1,187	6.6%
Maintenance of Trails (Work Areas)	600	800	4.4%
Employee Support (Showers/Lockers)	474	677	3.5%
Maintenance of Roads and Bridges (Salt and Sand Storage)	300	400	2.2%
Hazardous Storage	250	333	1.9%
Maintenance Administration (Office)	240	343	1.8%
Indoor Parking/Vehicle Storage	90	120	0.7%
Building Net	13,500		
Building Tare (nearest 100)	4,600		
Building (GSF, nearest 100)	18,100		
Site (Acres)	2.8		
Site Access / Utility Extensions (Cost)	\$100,000		

APR-13-2006 14:43

NPS/MWRD 2ND FLOOR

402 661 1982 P.06

Unique Construction Factors (Cost)	\$100000
Total Net Construction Cost (Not Calculated)	\$5000

Estimated Square Footage Report:

Room Description	# Persons	# Spaces or Units	Park Modified Spaces with Standard Drivers
Maintenance Administration (Office)			
Lobby/Waiting	0	1	120
Workroom/Storage	0	1	120
Office	0	1	0
NET ASSIGNABLE			240
Tare at 30%			103
Gross Square Feet			343
Employee Support (Lockers/Showers)			
Multipurpose/Break Room	16	12	300
Locker Room	16	1	144
Showers	16	1	30
NET ASSIGNABLE			474
Tare at 30%			203
Gross Square Feet			677
Maintenance of Park Buildings (Carpentry)			
Carpentry	1	1	1,000
Lumber Storage	0	1	200
Tool and Equipment Storage	0	1	100
NET ASSIGNABLE			1,300
Tare at 25%			433
Gross Square Feet			1,733
Maintenance of Park Buildings (Other)			
Combined Mech/Elect/Plumb Shop	2	1	400
Plumbing Storage	0	1	200
Masonry	1	1	150
Custodial	1	1	140
NET ASSIGNABLE			890
Tare at 25%			297
Gross Square Feet			1,187
Hazardous Storage			
Fertilizer/Herbicides Storage	0	1	150
Pesticide Storage	0	1	100
NET ASSIGNABLE			250
Tare at 25%			83
Gross Square Feet			333
Maintenance of Park Grounds (Work Area)			
Crew Room	6	1	450
Greenhouse	10	1	400
Seed/Bulb Storage	0	1	300
Tool and Equipment Storage	6	1	150
Ground Cover Storage	0	1	100
NET ASSIGNABLE			1,400
Tare at 25%			467
Gross Square Feet			1,867
Vehicle Maintenance (Repair)			
Large Vehicle Maintenance	0	2	1,050
Small Engine/Equipment Repair	1	1	300
NET ASSIGNABLE			1,350
Tare at 25%			450
Gross Square Feet			1,800
Indoor Parking/Vehicle Storage			

2

APR-13-2006 14:43

NPS/MWRD 2ND FLOOR

402 661 1982 P.07

Indoor Parking/Vehicle Storage			
Riding Mowers and Snowmobiles	0	3	90
NET ASSIGNABLE			90
Tare at 25%			90
Gross Square Feet			30
Maintenance of Roads and Bridges (Salt and Sand Storage)			
Crew Room	2	1	200
Tool/Equipment Storage	2	1	100
NET ASSIGNABLE			300
Tare at 25%			100
Gross Square Feet			400
Maintenance of Trails (Work Areas)			
Small equipment repair	0	1	300
Crew Room	2	1	200
Tool/Equipment Storage	2	1	100
NET ASSIGNABLE			600
Tare at 25%			200
Gross Square Feet			800
Other Functions (Storage)			
Fire or Emergency Vehicles Storage	0	1	1,200
Radio Communications Room	0	1	450
Fire Cache	0	1	400
NET ASSIGNABLE			2,050
Tare at 25%			683
Gross Square Feet			2,733
General Storage			
General Storage	0	1	1,600
NET ASSIGNABLE			1,600
Tare at 25%			533
Gross Square Feet			2,133
Centralized Warehouse			
Centralized Warehouse	0	1	3,000
NET ASSIGNABLE			3,000
Tare at 25%			1,000
Gross Square Feet			4,000
Site			
Building (nearest 100)			
Site Access			18,100
Site Access (Miles), new, paved		0.1	
Utilities			
Utility Extensions (Linear Feet)		4,100	
On-Site Utilities			
Power	0	1	1,000
Physical and Environmental Constraints			
Environmental		1.00	
Soils		1.00	
Slope		1.00	
Archaeology		1.00	
Parking			
Employee Vehicles	0	19	4,800
Large Vehicles	0	2	1,800
Small Vehicles	0	5	1,500
Covered Parking			
Small Vehicles	0	4	1,000
Large Vehicles	0	1	600
Riding Mowers and Snowmobiles	0	3	90

3

APR-13-2006 14:43

NPS/MWRD 2ND FLOOR

402 661 1982 P.08

Hiding mowers and snowmobiles	0	3	90
Excess Property Storage	0	1	15,000
Vehicle Fueling	0	1	5,000
Site Storage	0	1	4,000
Roads Materials Storage Bins	0	4	4,000
Covered Storage	0	16	1,200
Exterior Vehicle Wash	0	1	900
Recycle Bins	0	5	500
Site: Net Assignable (nearest 100)			60,100
Tare + Site Constraints			60,100
Site GSF (nearest 100)			120,200
Site Acres			2.8

Definitions:

GSF- Gross Square Feet

NASF- Net Assignable Square Feet

NSF- Net Square Feet

NTE- Not to exceed

Tare (for buildings)- Corridors, walls, mechanical, electrical, vertical shafts, vertical circulation, janitor closets, etc.

Additional Responses:

Current Maintenance Facilities
Ice House (HS 125)

289 nsf

Unusual Functions Noted by Facility Calculator

Centralized Warehouse

Communications room

Fire or emergency vehicles stored indoors

Fire Cache

Hazardous Materials Storage

Indoor Vehicle Storage

Justification of Unusual Functions

Centralized Warehouse located at Maint. to minimize the facility footprint at Visitor Center site, used for receiving and storage of supplies and materials needed for all divisions of the park. Will consist of three bays each being 20' x 20' x 10' in size for a total of 12,000 cubic feet. Communication room will contain the telephone and computer network equipment. Indoor storage for wildland fire vehicles due to winter weather conditions and theft or damage of equipment on the vehicles. Fire cache needed for wildland and prescribed fire equipment storage and workspace. Hazardous material storage for pesticide/herbicides, solvents, thinners, and other hazardous materials that may be generated by maintenance operations. Indoor vehicle storage used for large and small maintenance response vehicles (snow-plow and sander, utilities maintenance vehicle), small tractors used for snow and ice removal from sidewalks, porches, and trails, golf carts used for employee transportation, and vehicles containing supplies and materials.

Unique Construction Factors
Oil/water separator, 20 gpm,

\$5,000

4

APR-13-2006 14:44

NPS/MWRO 2ND FLOOR

402 661 1982 P.09

NPS Facility Planning Model Report

NOTE: Nothing in this report should be published as an Official Report of the NPS Facility Planning Model without Approval by the Office of Construction Program Management

Identification:

Project Title: TAPR-Curatorial-2006
 Model: Museum Collection Facility
 Type of Project: New Construction
 PMIS Number:
 Region: MWR
 Park Name: Tallgrass Prairie NP
 Your Name: Robert H. King
 Job Title: Facility Manager
 Park Suggested GSF:
 Concurred by (Region):
 Recommended by (WASO, CPM):
 Approved by (DAB):
 Created Date: 3/24/2006 12:43:36 PM
 Modified Date: 4/13/2006 2:39:45 PM
 Calculator Mode: Custom Calculator

Comments on this report:

This facility will be contained in the Visitor Center building.

All Modifications Subject To Approval**Drivers:**

Permanent Staff 0
 Others 2
 Object Storage 3,977

NPS Park Specific Calculations:**Museum Collection Model Calculations**

Core Museum Collection (NSF) 1,673
 Additional Functions (NSF) 0
 Tare at 20% (nearest 100) 400
 Building (GSF, nearest 100) 2,100
 Site (Acres) 0.20
 Total Net Construction Cost (Not Calculated)

Estimated Square Footage Report:

Room Description	# Persons	# Spaces or Units	Park Modified Spaces with Standard Drivers
Core Museum Collection Functions			
Staff Areas			
Museum File Storage	0	1	100
Staff Restrooms	2	2	75
Recycle Bins	0	1	40
Staff: Net Assignable			215
Public Areas			
Researcher Workspaces	2	2	160
Lobby/Exhibits	0	1	120
Public Lockers	0	1	50
Public: Net Assignable			330
Processing Areas			

APR-13-2006 14:44

NPS/MWRD 2ND FLOOR

402 661 1982 P.10

Processing Areas			
Receiving/Temporary Holding	0	1	80
Material Storage	0	1	50
Processing: Net Assignable			130
Objects Storage Area			
Storage Units, Pallets and Floor Area Storage			937
Archive Storage Area			
Paper, Maps, Media and Fireproof Cabinets			61
Core: Net Assignable			
Tare at 20%			1,673
Gross Square Feet			418
			2,091
Subtotal: Building Area			
Buildings: Net Assignable (nearest 100)			1,700
Gross Square Feet (nearest 100)			2,100
Site			
Building			
Parking: Private Vehicles			2,100
Site: Net Assignable (nearest 100)	0	2	660
Tare + Site Constraints			2,800
Site GSF (nearest 100)			3,900
Site Acres			6,700
			0.2
Physical and Environmental Constraints			
Environmental			
Soils			1.12
Slope			1.25
Archaeology			1.00
			1.00

Definitions:

GSF- Gross Square Feet
 NASF- Net Assignable Square Feet
 NSF- Net Square Feet
 NTE- Not to exceed
 Tare (for buildings)- Corridors, walls, mechanical, electrical, vertical shafts, vertical circulation, janitor closets, etc.

Additional Responses:

Evaluator
 Park Staff

Collection Storage Issues
 MWAC storage of recovered items and location of alternative storage at a central location within the region.

Unusual Functions Noted by Facility Calculator
 Storage needs based on "Estimate by Other"

2

APR-13-2006 14:45

NPS/MWRO 2ND FLOOR

402 661 1982 P.13

NPS Facility Planning Model Report

NOTE: Nothing in this report should be published as an Official Report of the NPS Facility Planning Model without Approval by the Office of Construction Program Management

Identification:

Project Title: TAPR-Visitor Center-2006
Model: Visitor Facility
Type of Project: New Construction
PMIS Number:
Region: MWR
Park Name: Tallgrass Prairie NPRES
Your Name: Robert H. King
Job Title: Facility Manager
Park Suggested GSF:
Concurred by (Region):
Recommended by (WASO, CPM):
Approved by (DAB):
Created Date: 3/24/2006 2:55:53 PM
Modified Date: 4/13/2006 2:40:08 PM
Calculator Mode: Custom Calculator

Comments on this report:

The visitor facility used with prairie bus tour operations.
 Theater seating to accommodate park visitor and one commercial/school bus.
 Museum collection stored and used by interpretive staff.
 Additional \$ for facility design to fit with the historic scene.

All Modifications Subject To Approval

Drivers:

Visitation and Staff

Standard Database Drivers

Park-Modified Drivers

Annual Visitation	15,281	15,281
Projected Annual Visitation	11,239	125,000
Average Peak Months	15.1%	15.1%
Capture Rate	100.0%	100.0%
Time Spent	0.50 hr	0.50 hr
Average Peak Visitors in VC at one time	8	94
Total Staff (NPS and Others)	11	11
Total Volunteers and Cooperating Associates	6	6

Benchmark Calculations:

A - Core VC with Standard Drivers

B - Core VC with Park Modified Drivers

Public Spaces (NSF, nearest 100)	1,600	2,800
VF Staff Area (NSF, nearest 100)	1,000	1,900
Tare at 25% (nearest 100)	900	1,600
Building (GSF, nearest 100)	3,500	6,300
Recommended:		
Area Per Person in Public Spaces (NTE)	50-55	30-35
Percentage of VF Staff Areas (NTE)	SF or 29%	SF or 30%
Percentage of Total Staff Areas (NTE)	SF or 29%	SF or 30%

NPS Park Specific Calculations:

C - Park Modified VC Spaces with Standard Drivers

D - Park Modified VC Spaces with Park Modified Drivers

Public Spaces (NSF, nearest 100)	7,600	8,100
VF Staff Area (NSF, nearest 100)	2,700	2,800
Administration (NSF, nearest 100)	0	0
Tare at 25% (nearest 100)	3,500	3,600
Building (GSF, nearest 100)	13,800	14,500
Site (Acres)	1.70	3.60

APR-13-2006 14:45

NPS/MMRO 2ND FLOOR

402 661 1982 P.14

Site (Acres)	1.70	3.60
Exterior Requirements	0.40	1.20
Site Access / Utility Extensions (Cost)	\$814,000	\$814,000
Total Net Construction Cost (Not Calculated)		
Actual:		
Area Per Person in Public Spaces	950	86
Percentage of VF Staff Areas	20%	19%
Percentage of Total Staff Areas	20%	19%
Recommended:		
Area Per Person in Public Spaces (NTE)	50-55	30-35
Percentage of VF Staff Areas (NTE)	SF or 30%	SF or 30%
Percentage of Total Staff Areas (NTE)	SF or 30%	SF or 30%

Estimated Square Footage Report:

Room Description	C - Park Modified Spaces with Standard Drivers	D - Park Modified Spaces with Park Modified Drivers	# Persons	# Spaces or Units
Core Visitor Facility				
Public Area: Lobby Spaces				
Hearing Device Distribution	50	50	-	1
Interpretive Materials Storage	100	100	-	1
Lobby/Orientation	450	480	32	1
Information Desk	120	120	-	1
Vestibules	140	140	5	1
Public Area: Exhibit Spaces				
Exhibit / Traveling Exhibit Area	900	900	-	1
Additional Exhibit Area	3,333	3,333	-	1
Public Area: Theater Spaces				
Audio/Visual Storage	68	68	-	1
Projection Booth	80	80	-	1
Theater 1	680	680	50	1
Public Area: Cooperating Assoc. & Concessionaire				
Interpretive Sales Storage	37	137	-	1
Interpretive Sales	150	547	-	1
Staff Area: Office Area				
Staff Restrooms	170	170	2	-
Offices	293	293	3	1
General Storage	120	120	11	1
Recycle bins	40	40	-	4
Staff Lockers	42	42	6	6
Interpretive Work Area	640	640	8	1
Library	235	235	-	1
Staff Break Room	175	175	7	1
Restrooms				
Family Restrooms	85	85	-	1
Male/Female Restrooms	350	350	-	2
Core VF: Net Assignable				
Tare at 25%	8,258	8,785		
Gross Square Feet	11,011	11,713		
Park Specific Functions				
Public Area: Interpretation and Education Spaces				
Children's Discovery Area	90	90	-	1
Demonstration Area	90	90	-	1
Multipurpose Room	1,200	1,200	-	1
Chair and Table Storage	75	75	-	1
Costumes Storage	160	160	-	1
Fees and Tickets Desk	75	75	1	1

2

APR-13-2006 14:45

NPS/MWRD 2ND FLOOR

402 661 1982 P.15

Fees and Tickets Desk				
Fees Queuing Area	160	160	19	1
Other Staff and Support Spaces				
Lost and Found Storage	40	40	-	1
Fee Counting Room	80	80	-	1
First Aid Station	100	100	-	1
Park Specific Functions: Net Assignable	2,070	2,070		
Tare at 25%	690	690		
Gross Square Feet	2,760	2,760		
Subtotal Building				
Net Assignable (nearest 100)	10,300	10,900		
Gross Square Feet (nearest 100)	13,800	14,500		
Site				
Building (nearest 100)	13,800	14,500		
Parking: Staff Vehicles	3,630	3,630	-	11
Exhibit Kiosks	800	800	-	4
Interpretive Trail	3,600	3,600	-	600
Wayside Exhibits	150	150	-	6
Interpretive Trail Improvements	3,000	3,000	-	500
Wayside Exhibit Improvements	125	125	-	5
Amphitheater	1,200	1,200	60	1
Bus Parking	1,530	1,530	-	1
Parking: Recreational Vehicles	1,440	5,040	-	7
Parking: Private Vehicles	0	27,060	-	82
Bus Platform	91	454	-	1
Porch, Patio or Overlook	60	570	19	1
Plaza	1,740	4,320	144	1
Site: Net Assignable (nearest 100)	31,200	66,000		
Tare + Site Constraints (nearest 100)	43,700	92,400		
Site GSF (nearest 100)	74,900	158,400		
Site Acres	1.70	3.60		
Site Access				
Site Access (Miles), new, paved	0.05	-	-	-
Utilities				
Utility Extensions (Linear Feet)	27,400	-	-	-
Physical and Environmental Constraints				
Environmental	1.12	-	-	-
Soils	1.25	-	-	-
Slope	1.00	-	-	-
Archaeology	1.00	-	-	-

Definitions:

GSF- Gross Square Feet

NASF- Net Assignable Square Feet

NSF- Net Square Feet

NTE- Not to exceed

Tare (for buildings)- Corridors, walls, mechanical, electrical, vertical shafts, vertical circulation, janitor closets, etc.

Additional Responses:**Park Visitation**

Requested change for total annual park visitation is from projected visitation information from a transportation and visitation study (1999) done in regards to the GMP.

3

APR-13-2006 14:46

NPS/MMRD 2ND FLOOR

402 661 1982 P.16

visitation study (1999) done in regards to the GMP.

Preserve (est. Nov. 1996) is in the initial stages of development. Changes are based on Desired Futures of approved GMP. Park is of medium size (10,894 acres). GMP anticipated annual operating costs of 2.1 million (FY2000 dollars) and 32 work years based on workload of preferred alternative. Facility will be sited near the historic ranch headquarters.

Visitor Peaks

Park visitors using the visitor center facilities.

Exhibits Over 100nsf and Less Than 200nsf

Exhibit of preserved animals once found in a natural tallgrass prairie ecosystem (100nsf).

Historic rock cart (200nsf).

Farm equipment (2 @ 200nsf each).

Other Options Explored In Lieu of Theater

Park indicates that no options were explored for the theater function.

Artifacts, Replicas or Exhibits Over 200nsf

Wheat Binder	250 nsf
Buggy	250 nsf
Animal exhibit	400 nsf
Animal exhibit	200 nsf
Rock cart	200 nsf
Cultivator	200 nsf
Horse drawn plow	200 nsf
Map and model of preserve	200 nsf
Root system of prairie tallgrasses	200 nsf
Large format wall photographs	200 nsf
Diagrams with Animals	200 nsf

Other Staff in Visitor Facility

The preserve is a partnership park. The majority of the land, at least 98%, is owned by The Nature Conservancy and assisted by a partner with the Kansas Park Trust. Presently the KPT sales and management are located in the historic ranch house.

These areas will be turned into interpretive areas when the KPT staff is relocated.

Volunteers are greatly used at the visitor center, ranch headquarters, and schoolhouse sites.

Unusual Functions Noted by Facility Calculator

Exterior Viewing Area: additional space generated.

Modified Visitation.

Amphitheater: additional space generated.

Wayside Exhibit Improvements.

Interpretive Trail Improvements.

Wayside Exhibits: additional space generated.

Interpretive Trail: additional space generated.

Exhibit Kiosks: additional space generated.

Costume Storage: additional space generated.

Multipurpose Room Storage: additional space generated.

Multipurpose Room: additional space generated.

First Aid Station: additional space generated.

Fee Counting Room: additional space generated.

Lost and Found Area: additional space generated.

Change in Theater Size.

Oversized Exhibits

Demonstration Area: additional space generated.

Children's Discovery Area: additional space generated.

Exceeds area for Public spaces.

Exceeds area for Visitor Facility Staff.

Exceeds area for Total Staff.

Justification of Unusual Functions

Exterior viewing area used for location of exterior exhibit kiosks/panels and to provide view of prairies and ranch headquarters.

Modified Visitation from transportation and projected visitation study related to GMP.

Amphitheater used for campfire programs and interpretative demonstrations.

4

APR-13-2006 14:46

NPS/MWRO 2ND FLOOR

402 661 1982 P.17

Interpretive costs for sample programs and interpretive center features.
 Costume storage needed for living history costumes. Living history presentations are done weekly.
 Interpretive trails will start here and connect to existing backcountry and nature walk trails.
 Wayside exhibits will be needed for new trails and views of the prairie and historic site.
 The multipurpose room will be used as an education room for school groups to experience many education/discovery programs. This room will have tables, chairs, chalk/marker boards.
 First aid station is needed for park visitors and staff. There is only volunteer EMS in the area.
 Tour bus fees will be collected and counted at this facility.
 Lost and Found items will be collected and stored here.
 The theater needs to be large enough to handle a commercial or school bus group and other park visitors.
 Exhibits will provide information to the park visitor that may not go to the historic ranch headquarters.

Environmental Costs

Cultural Landscape Issues Cost	\$125,000
--------------------------------	-----------

Additional Costs

Planned exhibit types:

Map/model of preserve.

Diagrams with animals

Large format wall photographs

Exhibit showing root system of prairie tallgrasses.

Interpretive film length

20 minutes

Interpretive film costs

\$150,000

5
 TOTAL P.17

APR-13-2006 14:44

NPS/MWRO 2ND FLOOR

402 661 1982 P.11

NPS Facility Planning Model Report

NOTE: Nothing in this report should be published as an Official Report of the NPS Facility Planning Model without Approval by the Office of Construction Program Management

Identification:

Project Title: TAPR-Curatorial-Addition-2006
Model: Museum Collection Facility
Type of Project: Addition
PMIS Number:
Region:
Park Name: Tallgrass Prairie NPres
Your Name:
Job Title:
Park Suggested GSF:
Concurred by (Region):
Recommended by (WASO, CPM):
Approved by (DAB):
Created Date: 4/4/2006 12:04:27 PM
Modified Date: 4/13/2006 2:39:58 PM
Calculator Mode: Custom Calculator

Comments on this report:

This museum collection will be a part of the Visitor Center facility.

All Modifications Subject To Approval**Drivers:**

Permanent Staff	0
Others	2
Object Storage	53,309

NPS Park Specific Calculations:**Museum Collection Model Calculations**

Core Museum Collection (NSF)	1,333
Additional Functions (NSF)	0
Tare at 25% (nearest 100)	500
Building (GSF, nearest 100)	1,800
Site (Acres)	0.10
Total Net Construction Cost (Not Calculated)	-

Estimated Square Footage Report:

Room Description	# Persons	# Spaces or Units	Park Modified Spaces with Standard Drivers
Core Museum Collection Functions			
Staff Areas			
Museum File Storage	0	1	100
Staff Restrooms	2	2	75
Recycle Bins	0	1	40
Staff: Net Assignable			215
Public Areas			
Researcher Workspaces	2	2	160
Lobby/Exhibits	0	1	120
Public Lockers	0	1	50
Public: Net Assignable			330
Processing Areas			

APR-13-2006 14:44

NPS/MWRO 2ND FLOOR

402 661 1982 P.12

Processing Areas		
Receiving/Temporary Holding	0	1 80
Material Storage	0	1 50
Processing: Net Assignable		130
Objects Storage Area		
Storage Units, Pallets and Floor Area Storage		597
Archive Storage Area		
Paper, Maps, Media and Fireproof Cabinets		61
Core: Net Assignable		1,333
Tare at 25%		444
Gross Square Feet		1,777
Subtotal: Building Area		
Buildings: Net Assignable (nearest 100)		1,300
Gross Square Feet (nearest 100)		1,800
Site		
Building		
Parking: Private Vehicles	0	2 660
Site: Net Assignable (nearest 100)		2,500
Tare + Site Constraints		3,500
Site GSF (nearest 100)		6,000
Site Acres		0.1
Physical and Environmental Constraints		
Environmental		1.12
Soils		1.25
Slope		1.00
Archaeology		1.00

Definitions:

GSF- Gross Square Feet
 NASF- Net Assignable Square Feet
 NSF- Net Square Feet
 NTE- Not to exceed
 Tare (for buildings)- Corridors, walls, mechanical, electrical, vertical shafts, vertical circulation, janitor closets, etc.

Additional Responses:

Evaluator
 Park Staff

Collection Storage Issues

MWAC storage of recovered items and location of alternative storage at a central location within the region

Unusual Functions Noted by Facility Calculator

Storage needs based on "Estimate by Other"

2

APPENDIX C
SCOPING AND PUBLIC REVIEW

August 17, 2006

D18 (TAPR)
xL7615

Jim Gray, Principal Chief
Osage Nation
P.O. Box 779
Pawhuska, Oklahoma 74056

Dear Chief Gray:

Tallgrass Prairie National Preserve has restarted the process of preparing a site alternatives study and environmental assessment for future facilities. We informed you of the initial start of this process in a letter dated October 28, 2003. Your office's response, dated November 17, 2003, is enclosed.

The current action alternative being considered for future facilities would require amending the preserve's general management plan to move the visitor information and orientation area. The new proposed location for the visitor center and administration facilities is south of the historic ranch headquarters along the west side of Kansas State Highway 177 (NE/4 Sec. 6 T19S R8E). The new proposed location for the maintenance facility is east of the Strong City Sewage Lagoons (NE/4 Sec. 17 T19S R8E). A map is enclosed showing the original location and the two new proposed locations.

Most of the area was previously disturbed by agricultural and ranch facilities development, and includes go-back prairie and brome fields. The area includes an unnamed tributary to Fox Creek. It is anticipated that development will be close but not occur directly in the stream area.

We would appreciate any additional input your office may have regarding this proposal. Please contact me at 620-273-6034 if you have any questions or need additional information.

Sincerely,



Stephen T. Miller
Superintendent

Enclosures 2

bcc:

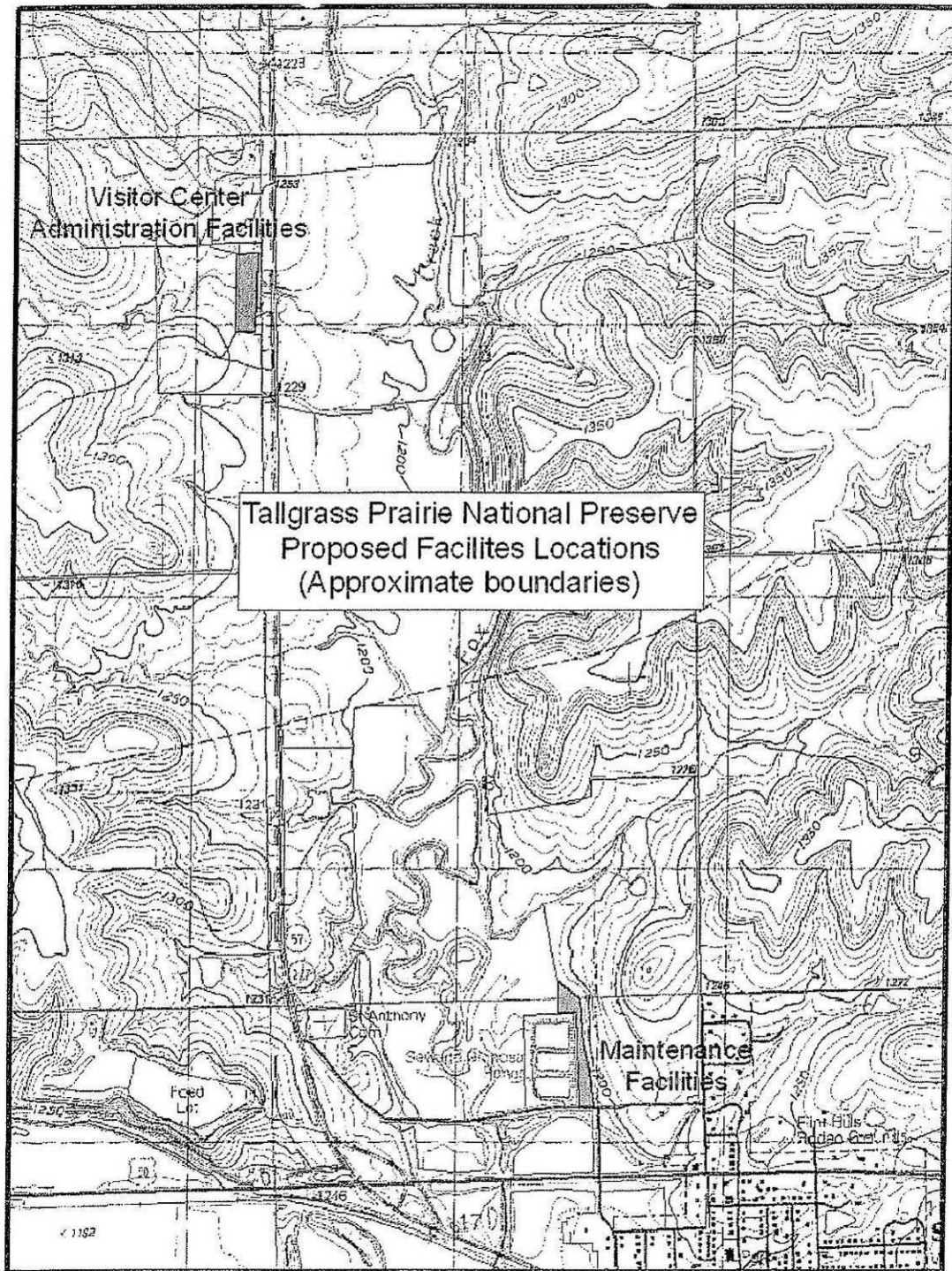
CNR

(central files

chron files

reading file

STMiller:mem:8/16/2006



August 17, 2006

D18 (TAPR)
xL7615

Gary McAdams, President
Wichita and Affiliated Tribes
P.O. Box 729
Anadarko, Oklahoma 73005

Dear President McAdams:

Tallgrass Prairie National Preserve has restarted the process of preparing a site alternatives study and environmental assessment for future facilities. We informed you of the initial start of this process in a letter dated October 28, 2003.

The current action alternative being considered for future facilities would require amending the preserve's general management plan to move the visitor information and orientation area. The new proposed location for the visitor center and administration facilities is south of the historic ranch headquarters along the west side of Kansas State Highway 177 (NE/4 Sec. 6 T19S R8E). The new proposed location for the maintenance facility is east of the Strong City Sewage Lagoons (NE/4 Sec. 17 T19S R8E). A map is enclosed showing the original location and the two new proposed locations.

Most of the area was previously disturbed by agricultural and ranch facilities development, and includes go-back prairie and brome fields. The area includes an unnamed tributary to Fox Creek. It is anticipated that development will be close but not occur directly in the stream area.

We would appreciate any comments your office may have regarding this proposal. Please contact me at 620-273-6034 if you have any questions or need additional information.

Sincerely,

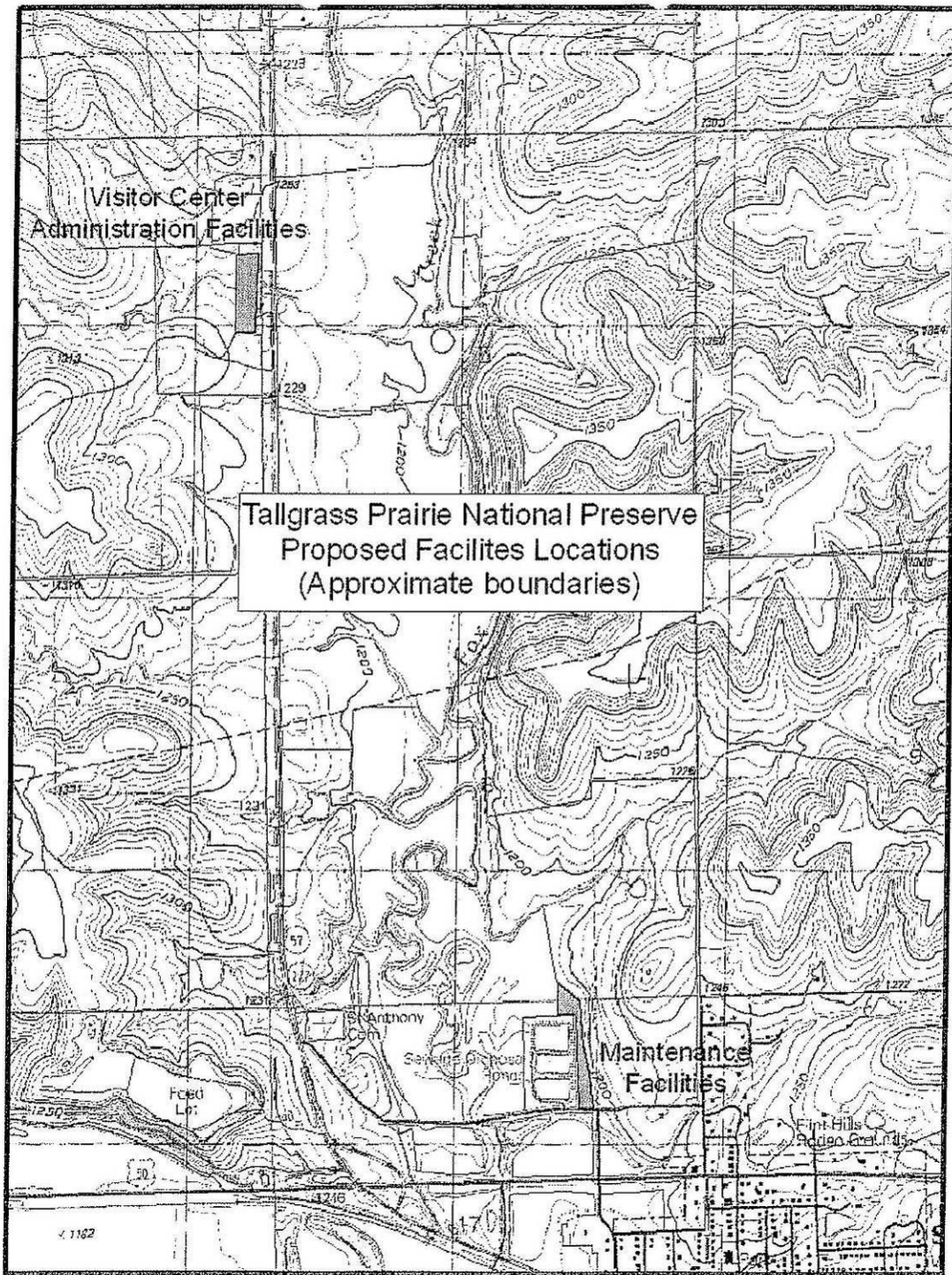


Stephen T. Miller
Superintendent

Enclosures 1

bcc:
CNR
central files
chron files
reading file

STMILLER:mem:8/17/2006



August 17, 2006

D18 (TAPR)
xL7615

Guy Munroe, Chairperson, CEO
Kaw Nation
P.O. Box 50
Kaw City, Oklahoma 74641

Dear Chairperson Munroe:

Tallgrass Prairie National Preserve has restarted the process of preparing a site alternatives study and environmental assessment for future facilities. We informed you of the initial start of this process in a letter dated October 28, 2003.

The current action alternative being considered for future facilities would require amending the preserve's general management plan to move the visitor information and orientation area. The new proposed location for the visitor center and administration facilities is south of the historic ranch headquarters along the west side of Kansas State Highway 177 (NE/4 Sec. 6 T19S R8E). The new proposed location for the maintenance facility is east of the Strong City Sewage Lagoons (NE/4 Sec. 17 T19S R8E). A map is enclosed showing the original location and the two new proposed locations.

Most of the area was previously disturbed by agricultural and ranch facilities development, and includes go-back prairie and brome fields. The area includes an unnamed tributary to Fox Creek. It is anticipated that development will be close but not occur directly in the stream area.

We would appreciate any comments your office may have regarding this proposal. Please contact me at 620-273-6034 if you have any questions or need additional information.

Sincerely,

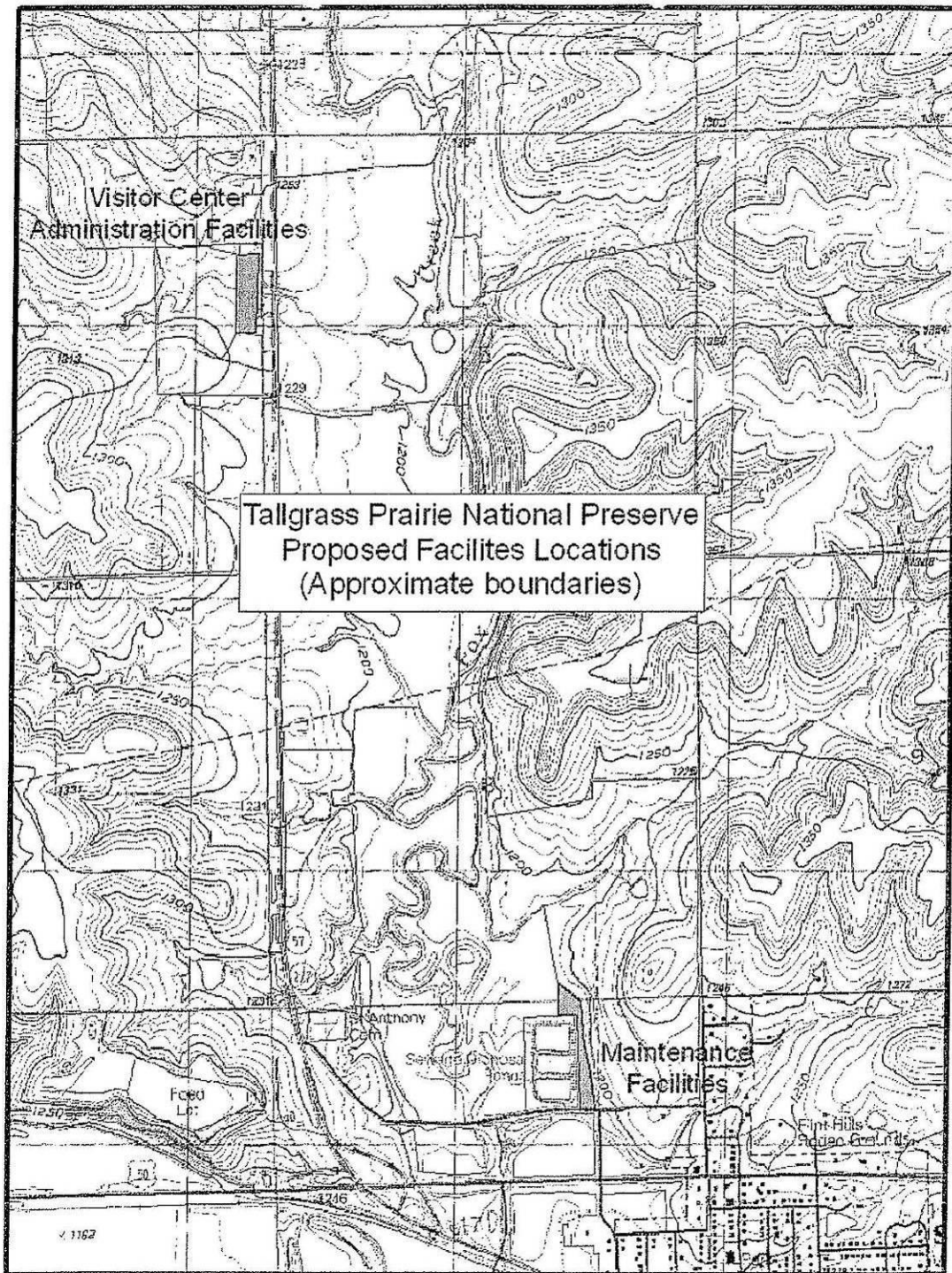


Stephen T. Miller
Superintendent

Enclosures 1

bcc:
CNR
central files
chron files
reading file

STMiller:mem:8/17/2006



August 17, 2006

D18 (TAPR)
xL7615

Ron Rice, President
Business Council
Pawnee Nation of Oklahoma
P.O. Box 470
Pawnee, Oklahoma 74058

Dear President Rice:

Tallgrass Prairie National Preserve has restarted the process of preparing a site alternatives study and environmental assessment for future facilities. We informed you of the initial start of this process in a letter dated October 28, 2003.

The current action alternative being considered for future facilities would require amending the preserve's general management plan to move the visitor information and orientation area. The new proposed location for the visitor center and administration facilities is south of the historic ranch headquarters along the west side of Kansas State Highway 177 (NE/4 Sec. 6 T19S R8E). The new proposed location for the maintenance facility is east of the Strong City Sewage Lagoons (NE/4 Sec. 17 T19S R8E). A map is enclosed showing the original location and the two new proposed locations.

Most of the area was previously disturbed by agricultural and ranch facilities development, and includes go-back prairie and brome fields. The area includes an unnamed tributary to Fox Creek. It is anticipated that development will be close but not occur directly in the stream area.

We would appreciate any comments your office may have regarding this proposal. Please contact me at 620-273-6034 if you have any questions or need additional information.

Sincerely,

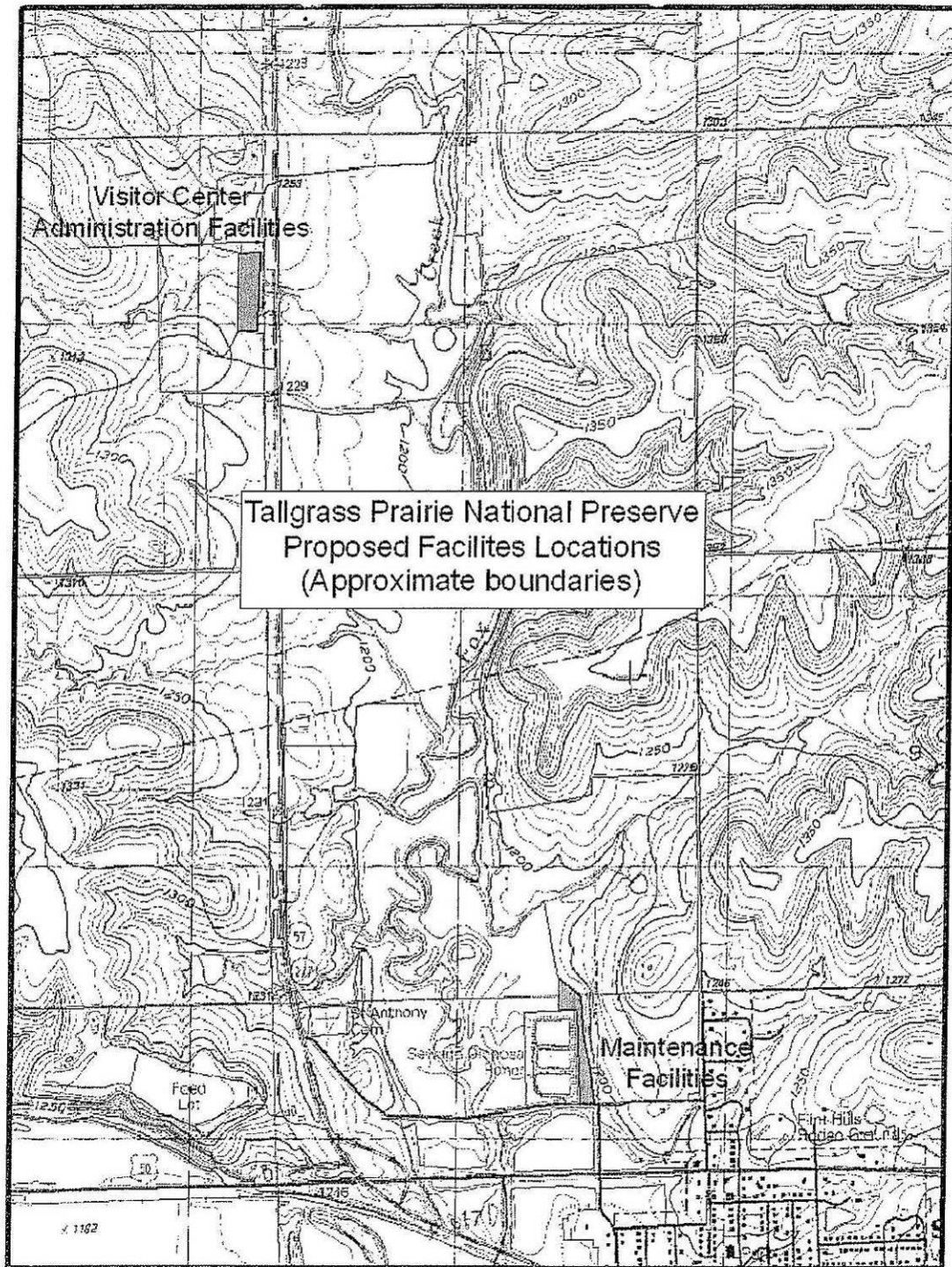


Stephen T. Miller
Superintendent

Enclosures 1

bcc:
CNR
central files
chron files
reading file

STMiller:mem:8/17/2006





National Park Service
U.S. Department of the Interior

Tallgrass Prairie
National Preserve

226 Broadway
P.O. Box 585
Cottonwood Falls, KS 66845

620-273-6034 phone
620-273-6099 fax

Tallgrass Prairie National Preserve News Release

October 27, 2003
For Immediate Release
Steve Miller, 620-273-6034

Site Development Planning Underway

Tallgrass Prairie National Preserve Superintendent Steve Miller announced today that the park is in the process of preparing a site development plan and environmental assessment for future facilities.

The park's General Management Plan (GMP), approved in December 2000, envisioned a primary visitor information and orientation area with visitor and administrative facilities. The GMP stated that the area would be located near the park boundary and the junction of Kansas State Highway 177 and U.S. Highway 50, or in closer proximity to Strong City.

Public input concerning this planning is welcome. Written comments can be sent by November 24, 2003 to: Superintendent, Tallgrass Prairie National Preserve, P.O. Box 585, Cottonwood Falls, Kansas 66845.

-NPS-

EXPERIENCE YOUR AMERICA

The National Park Service cares for special places saved by the American people so that all may experience our heritage.

D18 (TAPR)
xL7615

October 28, 2003

«First_Name» «Last_Name»«Honorary»
«Address_Line_1»
«Address_Line_2»
«City», «State» «ZIP_Code»

Dear «Title» «Last_Name»:

Tallgrass Prairie National Preserve is in the process of preparing a site development plan and environmental assessment for future facilities.

The park's General Management Plan (GMP), approved in December 2000, envisioned a primary visitor information and orientation area with visitor and administrative facilities. The pertinent section from the GMP is enclosed for your reference.

Written comments concerning this planning are welcome and can be sent to me by November 24, 2003 at the above address.

We look forward to consulting with you as we complete this important plan and associated environmental assessment.

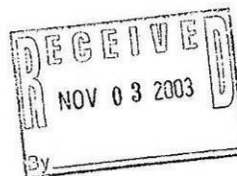
Sincerely,

sgd

Stephen T. Miller
Superintendent

Enclosure

identical letters sent to attached list



Preferred Alternative

- No vehicle-accessible campgrounds would be provided in order to reduce impacts on the preserve's natural and cultural resources, and views.
- Existing roads that contribute to the historic character would be used for management purposes and for non-motorized access to all areas of the preserve in order to minimize the need for additional trail development.
- Site specific standards would be developed for the evaluation, placement, and maintenance of roads within the preserve, in order to retain historic character, minimize erosion and the loss of prairie, and avoid intrusion into important views. While some roads may be part of the historic landscape, they may be removed or relocated where necessary to protect important resources, historic character, or views.

Visitor Information and Orientation Area

Primary visitor information and orientation would be offered in this management area, with a visitor center located near the junction of State Route 177 and U.S. 50, or in closer proximity to Strong City. This would provide the initial "first stop" for visitors, allowing them easy access to basic information about the preserve and nearby community resources and services, and enabling them to orient themselves and plan their visit. It would also serve as a primary staging area for the public transportation system and for basic education and interpretation efforts. This area would be located out of the floodplain and would be expected to receive the greatest concentration of visitor use. In this management area, visitors would have little need to physically exert themselves or make a long time commitment in order to learn about the preserve.

- This management area would include visitor and administrative facilities such as offices, museum collections and archives storage, a maintenance area, parking areas, and a public transportation center.
- A multi-purpose visitor center would take advantage of existing or proposed utilities. It would complement visitor services located in and near Strong City and Cottonwood Falls. The exact location would be selected to minimize impact on the prairie, retain aesthetic views, and preserve natural and cultural resources.
- Development within the preserve would be located near the boundary; it would be minimal and the design would be sensitive to the cultural and natural environment. New development would maintain harmony and continuity with the special visual qualities of the landscape and with the natural and cultural features that create a sense of time and place unique to the preserve. If primary visitor facilities are located outside the preserve, limited and sensitive development would be allowed in this area to create an inspiring and efficient portal to the preserve.
- Interpretation and education efforts in this management area would focus on orientation, information, primary interpretive stories, and bookstore sales.

Flint Hills Ranching Legacy Area

The boundary of this area would be largely determined by the landscape as it is viewed from primary points such as the ranch house, the barn, and the area between the historic ranch headquarters area and the Lower Fox Creek School. Within this management area, existing

APPENDIX C

Mary Allman, State Historic Preservation
Officer
Kansas State Historical Society
6425 S.W. Sixth Avenue
Topeka, KS 66615-1099

Robert Chapman, President
Pawnee Business Council
P.O. Box 470
Pawnee, OK 74058

Jim Gray, Principal Chief
P.O. Box 779
Pawhuska, OK 74056

Gary McAdams, President
Wichita Tribe
P.O. Box 729
Anadarko, OK 73005

Guy Munroe, Chairman
Kaw Tribe
P.O. Box 50
Kaw City, OK 74641

Crystal Douglas, Museum and NAGPRA
Director
Kaw Tribe
P.O. Box 50
Kaw City, OK 74641

Ronald Hammerschmidt, Ph.D., Director
The Division of Environment
Kansas Department of Health and Environment
1000 S.W. Jackson, Suite 400
Topeka, KS 66612-1367

Donald C. Drickey, P.E.
District Engineer
Kansas Department of Transportation
District Two
1006 North Third, P.O. Box 857
Salina, KS 67402-0857

Mike Hayden, Secretary
Kansas Department of Wildlife and Parks
1020 S. Kansas Avenue, Suite 200
Topeka, KS 66612

Scott D. Allegrucci, Director
Travel and Tourism Development Division
Kansas Department of Commerce and Housing
1000 S.W. Jackson Street, Suite 100
Topeka, KS 66612-1354

The Honorable Michael W. Cahoone
Mayor of Strong City
4th and Chase
P.O. Box 208
Strong City, KS 66869

The Honorable Dan Riggs
Mayor of Cottonwood Falls
220 Broadway, P.O. Box 487
Cottonwood Falls, KS 66845

Chase County Board of County Commissioners
Box 547
Cottonwood Falls, KS 66845

Dee Likes, Executive Vice President
Kansas Livestock Association
6031 S.W. 37th Street
Topeka, KS 66614-5129

Patty Clark
Public Policy Division
Kansas Farm Bureau
2627 KFB Plaza
Manhattan, KS 66505-8507

William H. Gill, Field Supervisor
Ecological Services Field Office
U.S. Fish and Wildlife Service
315 Houston Street, Suite E
Manhattan, KS 66502-6172

Gay Spenser, District Conservationist
Natural Resources Conservation Service
Chase County Conservation District
P.O. Box F
Cottonwood Falls, KS 66845

David L. Pope, Chief Engineer
Division of Water Resources
Kansas Department of Agriculture
109 S.W. 9th Street, 2nd Floor
Topeka, KS 66612-1283

Paul Pritchard, President
National Park Trust
415 2nd Street, NE
Suite 210
Washington, DC 20002

Alan Pollon, State Director
The Nature Conservancy
Kansas Chapter
700 S.W. Jackson Street, Suite 804
Topeka, KS 66603

John Bock
RR1, Box 8-2
Elmdale, KS 66850

Bill Browning
205 West Main
Madison, KS 66860

Don Castleberry
7511 Beck Road
Little Rock, AR 72212

Paul Duffedack
8403 Cherokee Lane
Leawood, KS 66206

Lee Fowler
P.O. Box 114
Cottonwood Falls, KS 66845

Jeanne Hatcher
RR1, Box 19
Strong City, KS 66869

Sharon Haun
704 Hockaday
Council Grove, KS 66846

Bill Haw
1600 Genessee, Suite 846
Kansas City, KS 64102

Ron Klataske
813 Juniper Drive
Manhattan, KS 66502

Barry Linnens
P.O. Box 67
Cedar Point, KS 66843-0067

Appendix C

NOV-21-2003 15:31

TALLGRASS PRAIRIE NPRES

P.26/26
11JIM GRAY
Principal ChiefKENNETH H. BIGHORSE
Assistant Principal Chief

*provided
copy to*

MEMBERS OF COUNCIL

MARK FREEMAN, JR.
HARRY ROY RED EAGLE
CAMILLE W. PANGBURN
JODIE SATEPAUHOODLE
JERRY SHAW
PAUL R. STABLER
DUDLEY WHITEHORN
JOHN W. WILLIAMS

OSAGE TRIBAL COUNCIL

NOV 20 2003

November 17, 2003

US Department of the Interior
National Park Service
PO Box 585, 226 Broadway
Cottonwood Falls, Kansas 66845-0585

RE: D18 (TAPR) xL7615

To Whom It May Concern:

The Osage Tribe of Oklahoma has evaluated the above reference sites, and we have determined that the site could have religious or cultural significance to the Osage Tribe being our former reservation & homeland. However, if construction activities should expose Osage archeological materials, such as bone, pottery, chipped stone, etc., we ask that construction activities cease, and this office be contacted so that an evaluation can be made

Should you have any questions, you can reach me at (918) 287-5446.

Thank you.

Sincerely,

Anthony P. Whitehorn
Tribal Enterprise Manager

TOTAL P.26

APPENDIX D
ALTERNATIVES CONSIDERATION

Brief Description of Fifteen Sites Considered for New Visitor / Administrative and Maintenance Facilities

A total of 15 sites were considered for locations for the new visitor /administrative and maintenance facilities. The team developed a list of 18 criteria by which to evaluate the sites. “Table D-1: Ratings for the fifteen Sites Against Eighteen Criteria” shows how the sites were rated. Criteria 1 and L1 were “screen out” criteria—the planning team considered these so important that sites not meeting the criteria were dismissed from further consideration. The planning team initially identified 10 candidate sites for the new preserve facilities in December 2003 (sites 1 through 10). Three additional candidate sites were identified in November 2003 (sites 11–13), and two sites were investigated by the team in February 2006 (sites 14 and 15).

Site 4 was dismissed due to floodplain concerns, its remote location, potential safety hazards, and inadequate space. Sites 6, 7, 8, and 9 were dismissed because they would require an amendment to the 2000 GMP (site 9 is also within the floodplain). Site 5 was dismissed because it would require purchasing a private residence, has inadequate space, and is located in a residential area (unacceptable impacts to neighbors).

In February 2003, the team narrowed the candidate sites to sites 1, 2, 3, and 10. Site 1 was later eliminated from consideration because it would destroy and fragment native prairie.

Three additional candidate sites were identified in November 2003. During public scoping, three letters from individual respondents recommended alternative sites for NPS facilities. The first suggested that the Strong City Opera House (theater building) on the city’s main street be considered for the visitor center location. A second choice expressed in the theater building letter was the team’s original site 9. The second letter pointed out that a building on the south side of U.S. 50 in Strong City (currently used as an antique mall and coffee shop) is available for sale and “could be what you are looking for.” The third letter recommended that an area just north of site 3, on the west side of SH 177, within the preserve boundary, should be considered. This area could be one of the original 10 candidate sites (site 8) or perhaps it is the area between sites 3 and 8. These three additional sites are numbered 11 through 13 in figure D-1.

The team discussed the merits of these sites and decided to use the original site criteria to evaluate these sites as they had the original 10 (see table D-1). Of the three, the site north of site 3 scored best, but like site 8, would require a 2000 GMP amendment. The theater building and antique mall sites did not score well compared to sites 2, 3, and 10. In summary, the team decided that these sites did not warrant additional consideration.

In January 2003, the team learned that the owner of site 3 did not want that site to be considered at this time for new NPS facilities, so it was eliminated from further consideration. Site 2 and site 10 were to be carried forward as alternatives.

During 2004, the Kansas Park Trust and the National Park Service investigated transfer of the KDOT parcel to the Kansas Department of Wildlife and Parks for lease to the National Park Service. It was determined that if KDOT discontinued use of the parcel of land, the property would revert back to the original owner. This scenario was further complicated by the original

owner having willed the property to a family trust, including many extended family members. This site (2) was determined not to be feasible and has been dismissed.

In March 2005, the Kansas Park Trust sold their land interest in Tallgrass Prairie National Preserve to The Nature Conservancy (The Kansas Park Trust had purchased the property from the National Park Trust one month earlier). In the summer of 2005, the Kansas Park Trust expressed concerns that the remaining alternative site was located too far from the ranch headquarters and visitors would likely stop at the visitor center, but not visit the ranch headquarters. The Kansas Park Trust suggested a site closer to the ranch headquarters.

The Nature Conservancy expressed concern over the size of the site development along the southern boundary and suggested minimizing the footprint and disturbance by siting the maintenance facility elsewhere. The Nature Conservancy also expressed concern about building on native prairie. The National Park Service, The Nature Conservancy, and the Kansas Park Trust agreed to revisit prior decisions and look at new alternatives. Due to The Nature Conservancy's desire not to impact native prairie, the remaining alternative within the preserve boundaries (site 10) was also dropped from further consideration.

Two new sites (sites 14 and 15 on figure D-1) were investigated by the team in February 2006. The first site consists of a parcel within the preserve boundaries, south of the current visitor parking area along the west side of SH 177. This area north of the creek was the site of a circa-1950s homestead. The vegetation consists of nonnative elm trees and "go back" prairie. Also, as part of this alternative, the maintenance facility would be sited adjacent to and east of the sewage lagoons near an existing storage structure.

The team discussed the merits of the two new sites and decided to use the original site criteria to evaluate these sites as they had the other 13 (see table D-1). Both sites scored well. The new alternative would require an amendment to the 2000 GMP; a criterion previously considered a "screen out" criterion. However, due to the recent change in ownership, the National Park Service has agreed to amend the 2000 GMP to incorporate their new partner's mission and not impact the native prairie along the southern boundary of the preserve.

The new site within the preserve, south of the ranch headquarters visitor parking lot and west of SH 177 was carried forward in this GMP revision as the preferred alternative. The no-action alternative is also carried forward for analysis.

The following are brief descriptions of each of the sites considered.

Site 1. This site is on the east side of SH 177, approximately 0.5 mile north of U.S. 50. Designated "Visitor Information and Orientation Area" by the 2000 GMP. Located north of St. Anthony Cemetery. This site has no known previous development.

Site 2. KDOT materials yard at the northeast corner of U.S. 50 and SH 177. This site has been used by KDOT for road material storage and in the past for asphalt mixing. A portion of the site is paved.

Site 3. Privately owned property at the northwest corner of U.S. 50 and SH 177. This large site was formerly used as a quarry and a cattle feedlot.

Site 4. Strong City train depot located to the south side of Strong City, to the west of the intersection of SH 177 and the railroad tracks. This site has been previously disturbed (depot, parking lots, and roads).

Site 5. Privately owned land. Located southeast of the sewage lagoons, in the northwest portion of Strong City, on the south side of a county road. Current use is residential.

Site 6. Preserve lands east of the sewage lagoons and northwest of Strong City. Designated “Day Use” by the 2000 GMP. It is undeveloped and apparently undisturbed.

Site 7. Preserve lands north of the Flint Hills rodeo grounds, on the northeast perimeter of Strong City. Designated “Day Use” by the 2000 GMP. It is undeveloped and apparently undisturbed.

Site 8. Preserve lands northwest of St. Anthony Cemetery, on the west side of SH 177, approximately 0.5 mile north of U.S. 50. Designated “Flint Hills Ranching Legacy Area” by the 2000 GMP. A human-made pond is present, but there is no other evidence of development.

Site 9. Preserve lands south of U.S. 50, along the northwest boundary of Strong City. Designated “Flint Hills Ranching Legacy Area” by the 2000 GMP. Previous development includes use for agriculture and flood dikes.

Site 10. Preserve land located southeast of St. Anthony Cemetery, less than 0.25 mile east of SH 177, and 0.25 mile north of U.S. 50. Designated “Visitor Information and Orientation Area” by the 2000 GMP. There is no evidence of previous development.

Site 11. The Strong City Opera House (theater building) on the city’s main street.

Site 12. A building on the south side of U.S. 50 in Strong City (currently used as an antique mall and coffee shop).

Site 13. Preserve lands northwest of St. Anthony Cemetery, on the west side of SH 177, approximately 0.5 mile north of U.S. 50. Designated “Flint Hills Ranching Legacy Area” by the 2000 GMP. A human-made pond is present on the west side of this portion, but there is no other evidence of development.

Site 14. Preserve land on the east side and adjacent to the sewage lagoons along on the north side of CR 227, approximately 0.5 miles from Strong City. The ground cover is previously disturbed from construction of the sewage lagoons and an existing storage structure.

Site 15. Preserve land located approximately 2.0 miles north of the intersection of SH 177 and U.S. 50, along the west side of SH 177. The area did contain mid-1930s ranch structures that have been removed and the ground cover is generally described as “go back” prairie.

Sites 1, 6, 8, and 9 were included in a 1999 study of potential visitor information station sites conducted for the National Park Trust (RBA 1999).

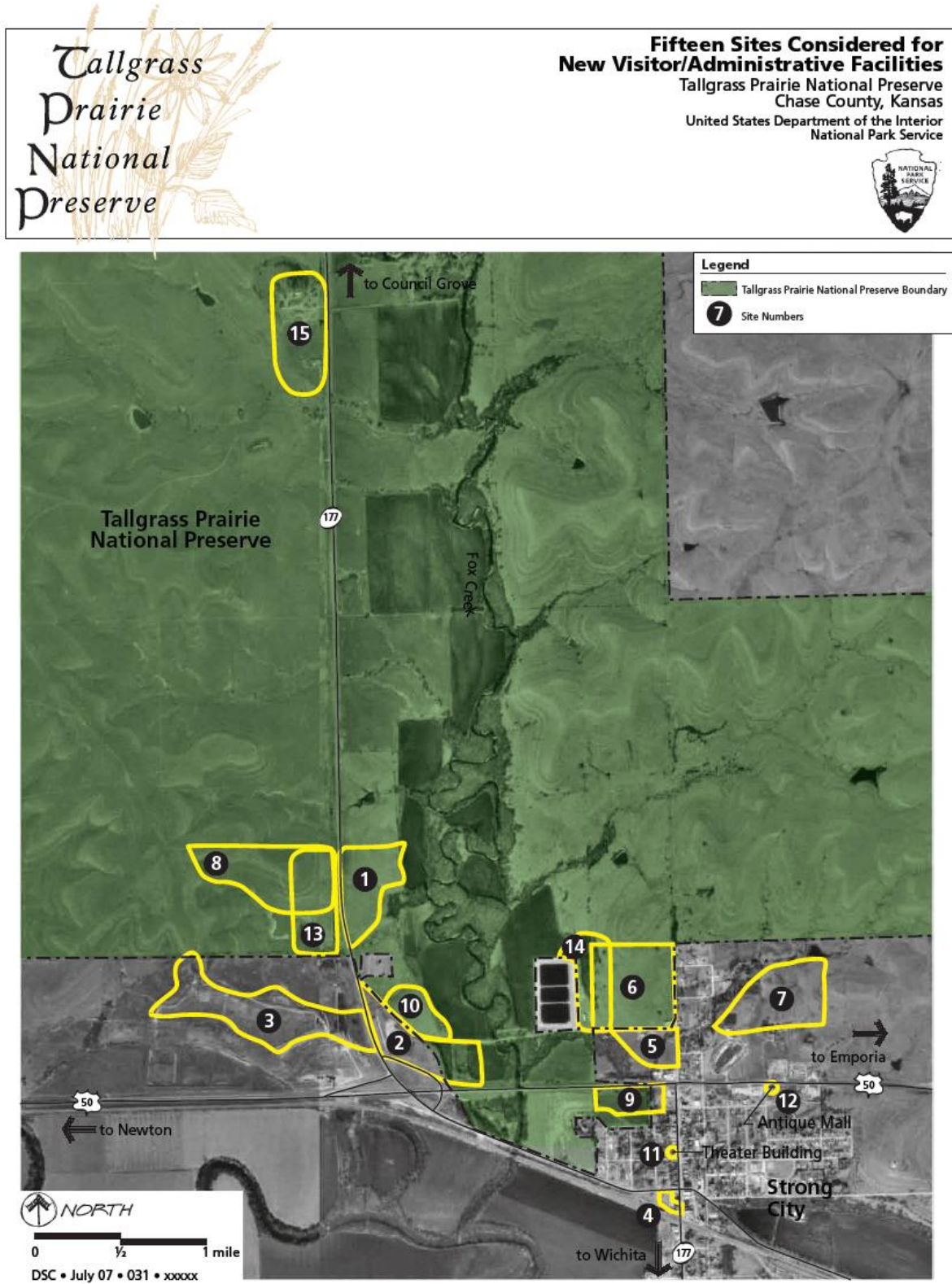


Figure D-1. Fifteen Sites Considered for New Visitor / Administrative Facilities

Table D-1. Ratings for the Fifteen Candidate Sites Against Eighteen Criteria

Criteria	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13	Site 14 (Visitor Center)	Site 15 (Maintenance)
A—near preserve boundary	●	●	●	○	●	●	●	●	●	●	○	○	●	○	●
B—good access to utilities	●	●	●	●	●	●	●	●	●	●	●	●	●	○	●
C—desirable views from site (includes potential future development)	●	○	○	○	○	○	○	○	○	○	○	○	○	●	N/A
D—complex is hidden or can be screened from important viewpoints	○	○	●	●	●	○	○	●	●	●	●	●	●	○	●
E—convenient access to U.S. 50 and SH 177	●	●	●	○	○	○	○	●	○	●	○	○	●	●	○
F—enough room to accommodate visitor services, administration, and maintenance	●	●	●	○	○	●	●	●	○	○	○	○	●	●	●
G—good visual connection to ranch site	●	●	●	○	○	○	○	●	○	●	○	○	●	●	N/A
H—good connection to transportation system route (old roadbed)	○	○	●	○	○	○	○	●	○	○	○	○	●	●	N/A
I—out of floodplain	●	●	●	●	●	●	●	●	○	●	○	●	●	●	●

Table D-1. Ratings for the Fifteen Candidate Sites Against Eighteen Criteria

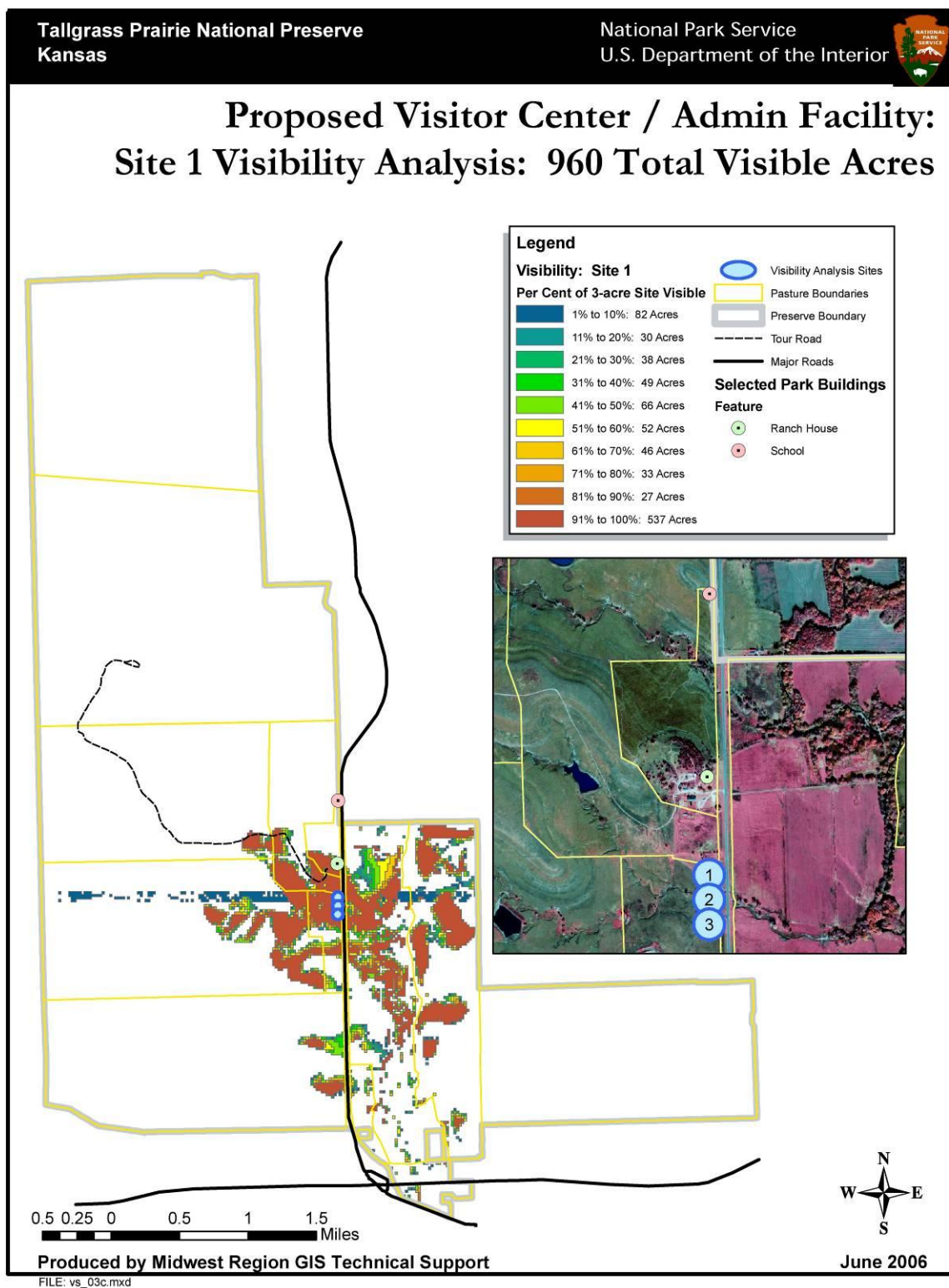
Criteria	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13	Site 14 (Visitor Center)	Site 15 (Maintenance)
J—minimizes impact on prairie (site has been disturbed)	○	●	●	●	●	○	◐	○	●	○	●	●	○	●	●
K—minimizes impact on neighbors	●	●	●	◐	○	○	○	●	○	●	○	●	●	●	◐
L1—does not require GMP amendment	●	●	●	●	●	○	○	○	●	●	●	●	○	○	○
L2—does not require land purchase or transfer	●	◐	○	◐	○	●	●	●	●	●	◐	◐	●	●	●
M—defensible from wildland fire	◐	●	◐	●	●	◐	◐	○	●	◐	●	●	○	◐	●
N—has connection with other preserve opportunities	●	●	◐	○	◐	◐	◐	◐	○	●	○	○	◐	●	N/A
O—has expansion potential	◐	◐	●	○	○	●	◐	●	○	◐	○	○	●	◐	●
P—sustainability potential (southern exposure, protection from northwest winds)	◐	◐	●	○	◐	●	○	●	◐	◐	◐	◐	●	●	◐
Q—low potential for hazardous substances	●	○	○	○	◐	●	◐	●	◐	●	●	●	●	●	◐

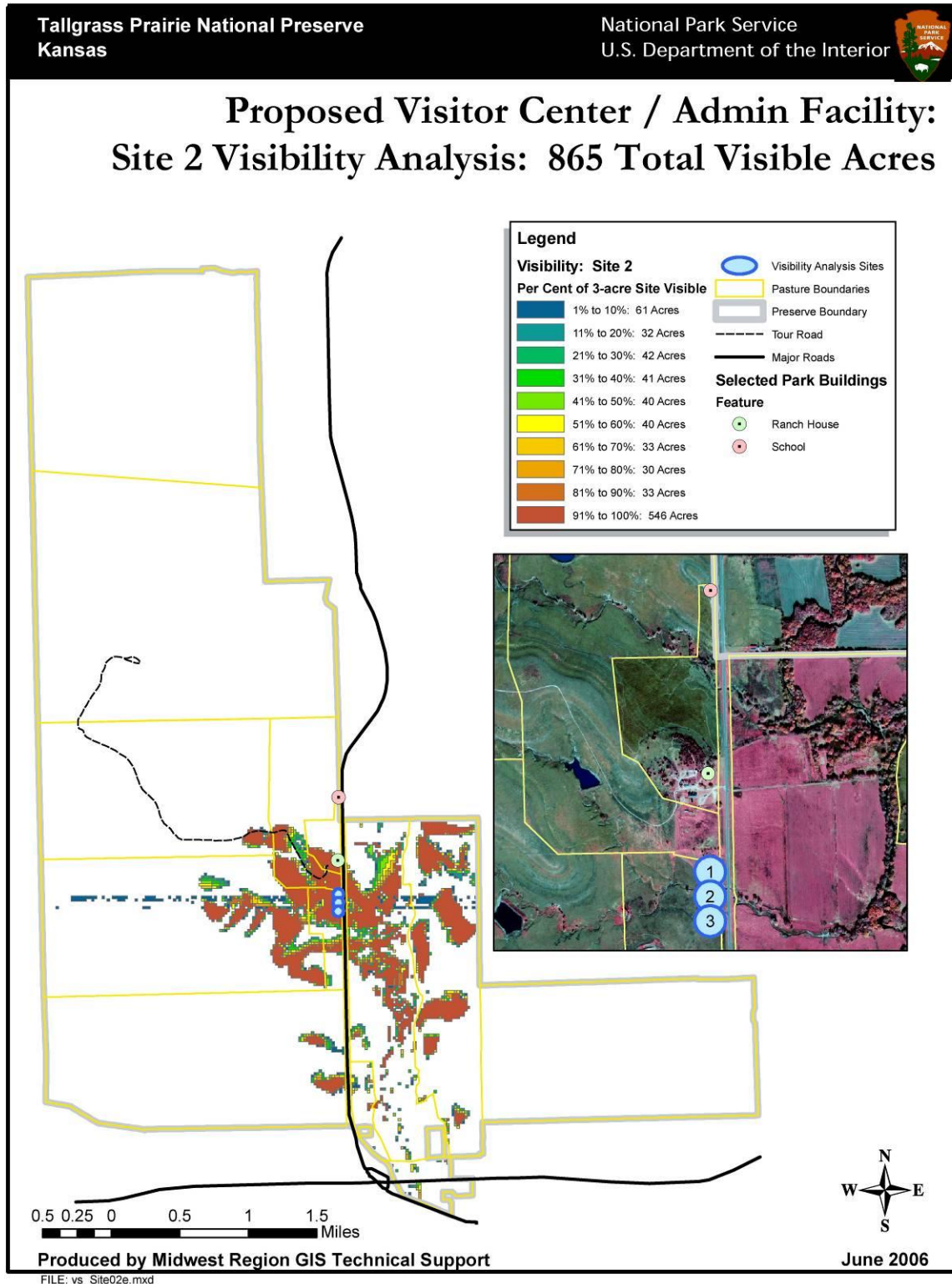
● = meets the criteria

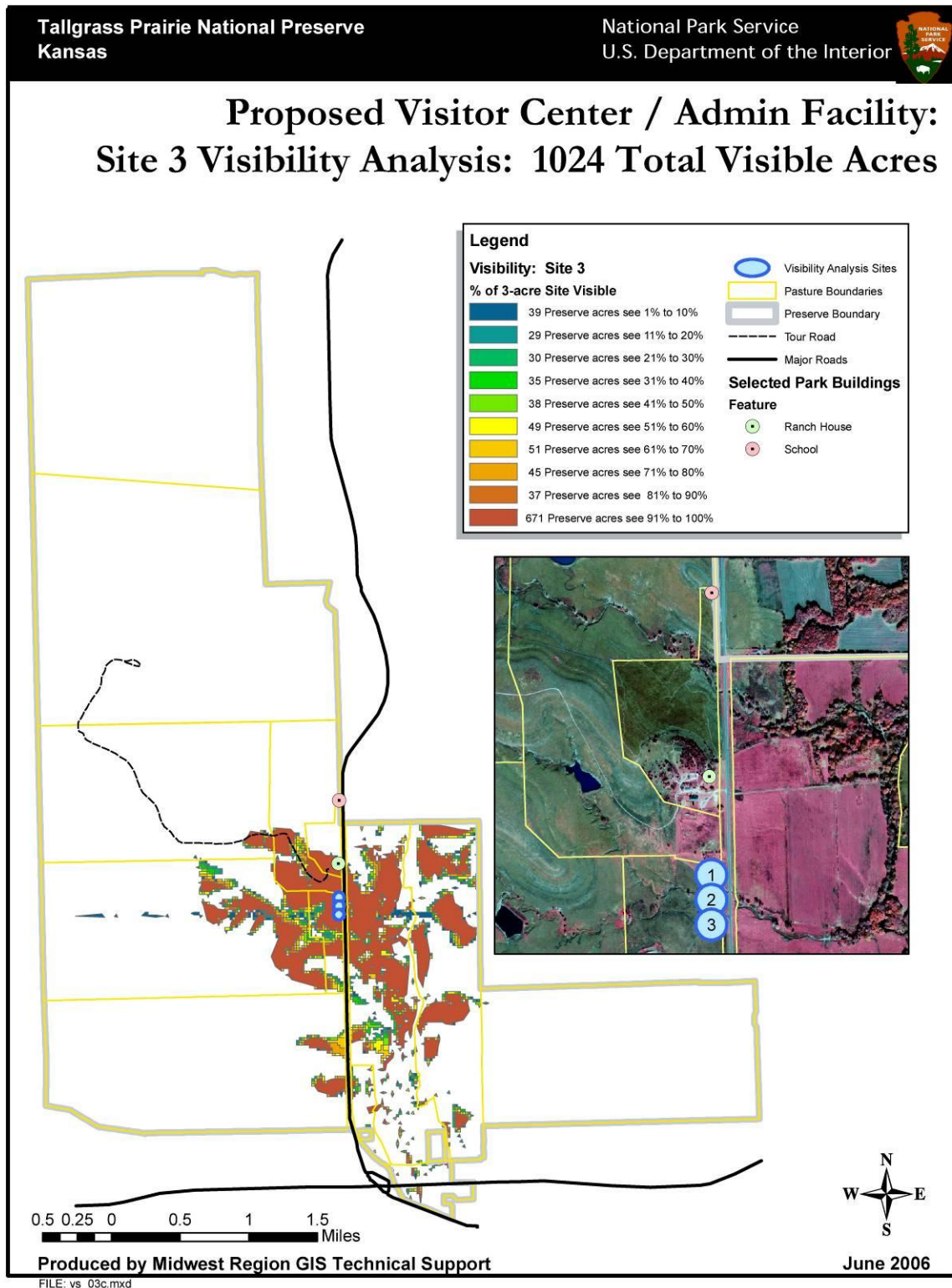
◐ = somewhat meets the criteria

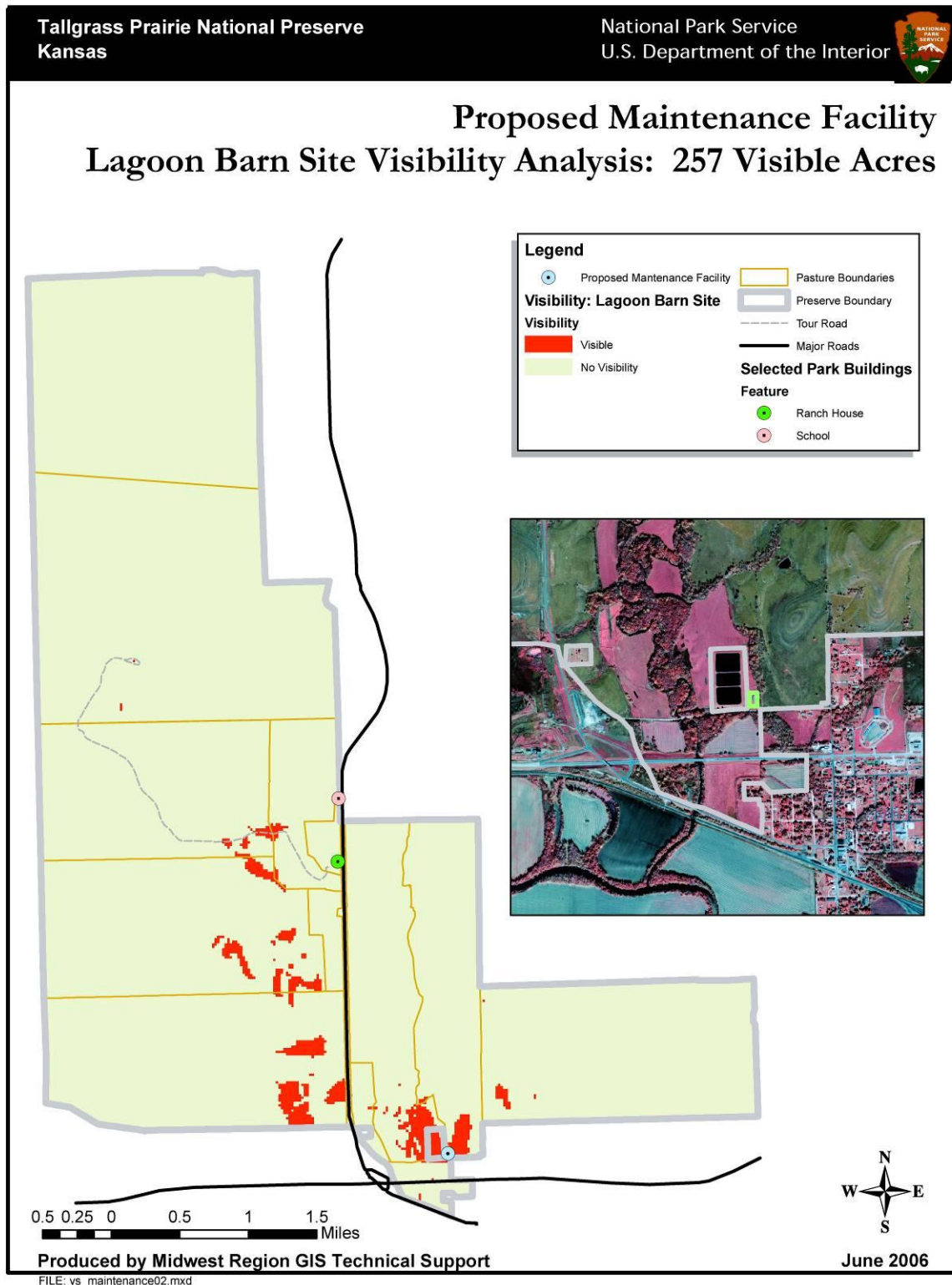
○ = does not meet the criteria

APPENDIX E
SITE VISIBILITY ANALYSIS MAPS









National Park Service
U.S. Department of the Interior



Tallgrass Prairie National Preserve
Chase County, Kansas